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ADMIRAL SIR ASTLEY COOPER KEY

From a Photograph by the Stereoscopic Co.

MEMOIRS

OF

ADMIRAL THE RIGHT HONBLE.

SIR ASTLEY COOPER KEY

G.C.B., D.C.L., F.R.S., ETC.

BY

VICE-ADMIRAL P. H. COLOMB

AUTHOR OF

"ESSAYS ON NAVAL DEFENCE" "SLAVE CATCHING IN THE INDIAN OCEAN"

"NAVAL WARFARE" ETC.

METHUEN & CO.
36 ESSEX STREET, W.C.
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PREFACE

LOOKING back on the composition of this work, which has been a long time in hand, I am made aware that, difficult as I thought it when the task was undertaken, it proved still more difficult in carrying out. Dear as Sir Cooper Key's memory is to me, I should never have volunteered to be the one to attempt its preservation. But it came about that while he was recovering from his penultimate illness, a biographical sketch of mine fell into his hands, and he was so much struck by it that he made it a request to his family, that if anything was to be written about him, the writing should be committed to my care. The request was conveyed to me under circumstances when it was impossible to refuse it; and my chief consolation has been, that as I have honestly attempted to portray a character which I feel to have been a very perfect one, I am not called on to pass judgment on what I have done.

I hope that I have taken the right course in perpetually mingling the natural character and the effect of environment upon it. Human nature, I take it, is ever made up of these two elements; but the interest of Sir Cooper Key's life seems to be especially involved in the combination, as so much of the material environment was of his own creation. In this respect the story I have told is perhaps almost unique as a story, though it is but a very full illustration of the modern naval officer's life and being.

I think there is good reason for suggesting that though the material progress of the navy and administrative change came to be so mingled in the development of Sir Cooper Key's personality, they were in a sense superposed upon it by the circumstances of his day. That is, that though from the very first we can trace in him an aptitude for dealing with the material and the administrative sides of the naval service, his conduct in command of the *Fanny*, the *Bulldog*, the *Amphion*, and the *Sans Pareil*, to say nothing of the share he took in the executive conduct of the Board of Admiralty, which I have set out in the eighteenth chapter of this book, show that under war conditions his name might have stood on the roll of great admirals. Evidently, he possessed all the courage, independence, and decision which go to make a great naval leader; while his personal power of fascination and charm would have ensured him enthusiastic followers.

Of all the prominent men who have led the navy in my time, I was best acquainted with the subject of this Memoir, and with Sir Geoffrey Hornby. I do not think it is altogether fancy which has led me to see almost an infinite number of parallelisms in character between Sir Cooper Key and Nelson, and between Sir Geoffrey Hornby and Jervis. Each of these men had a warm admiration for the other, though Sir Geoffrey Hornby cooled somewhat towards his friend in the way that is common—Nelson setting the example—when the latter became a member of the Board of Admiralty. Yet Sir Geoffrey Hornby put on record the highest and the truest appreciation of his brother admiral. " If," wrote Sir Geoffrey, in advocating the maintenance of the *Britannia* as a training school, " she could once in twenty years produce a Cooper Key, she would be well worth the country's maintaining her."

I could not have written the book had it not been for the kindness of the Admiralty in giving me a very free access to documents; for, as will be observed, the private sources of information on which to build the later life were few.

My thanks are especially due to the Earl of Northbrook, without whose aid it would have been difficult to write Chapters XVII. and XVIII. He kindly gave me access to all the papers in his possession that related to Sir Cooper Key's action in the time during which he held the office of First Lord of the Admiralty; and he did me the further kindness of advising me as to omitting such parts of the original of Chapter XVIII. as could not properly appear with advantage to the public service.

I also have to thank members of Sir Cooper Key's family and others who helped me with material, and in clearing up doubtful points. The late admiral's brother, Commander B. K. Key, undertook the wearisome task of wading through the columns of the *Times* for several years, and extracting everything likely to be of use to me.

July 1898.

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MEMOIRS OF SIR COOPER KEY

CHAPTER I

AND COLLEGE—1827–1835

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American Civil War.
The battle to him, in backward
regard, where the battle ands to the *Britannia*
cadet.

But the American Civil War would be to the cadet far more distant in the historical past than Trafalgar could have appeared to Cooper Key and his first shipmates. For the gigantic changes, moral and material, which had set in upon the navy before the Crimean War, and which, driven by that spur, have overleaped all visible boundaries, had hardly wakened in Key's boyhood. The material surround-

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ERRATA.

Page 2, line 15, after the word "father" insert "afterwards widely celebrated as a surgeon."

Page 2, line 18, for "the late Samuel Cooper, of Yarmouth," read "the Rev. S. Lovick Cooper."

Page 2, line 22, for "Dr. Key" read "Mr. Aston Key, F.R.S."

Page 271, line 24, for "E. A. M'Neil, Esq.," read "E. A. McNeill, Esq.", and in the Index, for M'Neill" read "McNeill."

ings of his first ship were essentially those of the last century, and the moral school was one hundred years old at the least. Collingwood's system of discipline had then taken little or no hold on the ordinary naval mind,—he had been dead only twenty-five years,—and a thoughtless terrorism was the engine of order in most common employment.

It was Cooper Key's lot to see from the very first beyond these surroundings; to be attracted, while still in the jungle, to the mountain ranges only occasionally visible over the tree-tops, and to press onward to points abreast of the changes, and then to control them.

Astley Cooper Key was the second of nine children. He was born on the 18th of January 1821, at St. Thomas' Street, in the City of London, his father being at that time demonstrator at Guy's Hospital. His father was the eldest son of Dr. Key, a well-known physician, and his mother the daughter of the late Samuel Cooper, of Yarmouth, and niece of the great surgeon, Sir Astley Cooper.

Young Key had not much voice—boys sent to sea seldom can have much real voice—in the choice of his profession. Dr. Key had no family connection with the navy, and apparently no special friendships amongst naval officers; but he had acquaintances, and so had naturally Sir Astley Cooper, amongst some of the leading naval men, and probably some of these acquaintanceships determined the father's choice.

School life for the boy began unusually early, as he was initiated into what was outside home life at Mrs. Sargeant's school at Brighton before he was six years old. Thence he was transferred to Mr. Westcombe's at Winchester, and spent a few months before joining the Naval College at Portsmouth at a school at Hampton managed by Mr. Mills.

The muscular energy, lightness of limb, and necessity for bodily exertion which characterised the admiral's later years seem to have been present in the child. For the family recollection is that the child was more remarkable for mischief and fun-creation than for anything else, unless it were for sweetness of temper and warmth of affection, which grew with his growth and ended but with his life. It is said that the "minding of his book," which formed the staple advice to the children of his day, was but little attended to at first. The natural ability and God-given clearness of thought which were the boy's heritage, having proved sufficient to gain a prize, even in the absence of exertion, it is said that the result was the opposite of what might have been expected. The good thing which had so unexpectedly come to him seemed worthy of being secured by more certain methods, and the family tradition has it, that so long as the spirit of mischief could be kept under, the boy threw himself on to whatever was to be done, with the whole of his not inconsiderable might. That passion for work which distinguished the First Sea Lord of the Admiralty, which was the lament of his friends who knew of the bundles of papers brought away from the office to be dealt with after dinner, and the complaint of some who objected to so much absorption into one hand, had broken out certainly at the Naval College, which he joined in the year 1833.[1]

---

[1] At this time youngsters entered the navy by two separate doors. Through one the boy entered as a volunteer on board some man-of-war, often by the nomination of the captain, who was his friend or relative, and who took him as a sort of apprentice to learn the trade of naval war under his immediate supervision. The other method was as follows. In the year 1729 there was founded at Portsmouth an establishment termed the Royal Naval Academy, which was approved and extended under George III. in the year 1773. By an Order in Council, the Academy was placed in Portsmouth Dockyard, with a view to the training constantly forty young gentlemen in the principles and practice of navigation, marine surveying, gunnery, fortification, mechanics, drawing, and various other studies preparatory to their entrance into actual sea service; of which number fifteen were proposed to be sons of commissioned officers of the Royal Navy.

In February 1806 the buildings in the dockyard were ordered to be altered and enlarged; the title of the establishment was changed to "Royal Naval College," and the number to be admitted was raised from forty to seventy, of which forty were to be the sons of commissioned officers. The staff of the College was to consist of a governor, lieutenant-governor, and inspector; a professor, preceptor, mathematical master, and housekeeper; a writing, drawing, French, fencing, dancing master; a surgeon, and a gunner of Marine Artillery.

The First Lord of the Admiralty for the time being was the governor, and the captain of the *Excellent* was the lieutenant-governor, and real executive head of the College.

The qualifications for entry were good moral conduct, of which a certificate was required from the master under whom the boy had been instructed, "or if he

A passion for work, even in the young, is not uncommon; but a passion for whatever work ought to be done at the time that it ought to be done, is perhaps less frequently met with. There is the passion, and the controlled passion; and Key, the boy, at the age of thirteen, seems to have possessed the latter.

To me, boys' letters have an inexpressible charm. It may be held that they disclose nothing of the mind that produces them, or it may be thought that there is no mind to disclose at an early age. Colour is given to either proposition by the similarity of boys' letters in form. A boy is, in the face of a letter, like an apprentice at the lathe. There is the engine of language for the shaping of thought, and there is the mechanical tool to record and mark the idea in the form of words. Both are still somewhat strange to the apprentice, and, whatever the design in the mind may be, the skill arising from use is wanting both in the managing the language and the pen in recording it. So the design can only be intelligible when it is of a simple character. The ideal is not and cannot be there, though it may be latent in the mind of the writer. Yet the tendency

had used the sea, from the captain under whom he last served." He was expected to know the first four rules of arithmetic, reduction, and the rule of three; to write English from dictation, and to construct English sentences. It was recommended that the candidate should know the definitions, axioms, and postulates of Euclid. The age for entry was not below thirteen, and not above sixteen; and it was considered that a service at sea of from one to three years before entry in the College was so important that a preference for entry in the College was given to those candidates who had so served. It was supposed that a boy entering, properly qualified, would complete the education in two years, and the whole stay at College was limited to three years. The time passed at the College was allowed to count as service up to the limit of two years, and then at least four years must be passed in a sea-going ship before the midshipman could present himself for examination touching his qualifications for the rank of lieutenant. The parents of the collegian were called upon to lodge security to the amount of £200, as pledge that the boy would continue to serve in the navy after leaving the College until he should have completed the time necessary to qualify him for the rank of lieutenant. But this was not required if the boy had served two years at sea before entry at the College.

The vacations at the College were but two—four weeks at Christmas and five weeks at Midsummer. Government paid to the credit of each student at College four shillings per day, which went to defray expenses. The boys were allowed one shilling a week pocket-money, and on return from vacation they might have one guinea in their pockets as a present from their friends, but no more.

towards the ideal may be seen even in the simple and possibly clumsy forms which the apprentice—for want of use—is alone capable of presenting. And the charm of a boy's letters consists apparently in the almost unconscious mental effort towards forming the hidden ideal. I trace Key's passion for work, and the reasoned determination that the passion shall be utilised in the direction where duty and the fitness and order of things point, in a letter written from the Naval College when the boy was nearly thirteen years old—

> "This last month I have second merit ticket, instead of first, which I got last time. I am what they call here, five months before my time; that is, I have been here three months, and learnt in that time as much as I ought to have done in eight months. I am, in trigonometry again, which is very easy, particularly for me, because I have done it before. I mean to try for a prize at the end of the half, for there is a prize for French, English, drawing, geography, and mathematics. I don't think I have much chance of the French prize, or of the drawing prize, for in our division (the College is divided into three divisions who do different things at the same time, so that, while one division is doing drawing, another is doing French, and the other English) there are two or three fellows who have been in French four or five years, while I have been in it not quite a year. So you must not expect me to get that prize. The drawing prize: as I do not draw one of the *best*, you know; but I think I have some chance (though not much) of the English, geography, and mathematical prize. But nothing can be done without trying, so I will see what I can do. I am going on in drawing very well; I am now doing sepia, and I will soon begin painting. I like drawing very much indeed; I would sooner do it than go out to play, and I am quite sorry when the time comes to put up our books."

There is one difference between Key's and the usual boys' letters which is very marked. His careful remembrances of all the various members of his family, the thoughtfulness for, and of, each of them, and the tenderness of his expressions of affection towards them, are all signs of stronger emotional being than we usually meet in young boyhood. Not only so, but there is a removal of the mind from view of the things seen to the contemplation and picturing of the things not seen, which is perhaps rare at the age of thirteen.

But what little things note the lapse of time! The spring of change which was about to burst forth had not shown itself. Key's letters from College are on square letter-paper, sealed; and their postage from Portsmouth to London was

eight times the present rate. Nor would the letters at first glance appear to be only sixty-three years old; they might quite as readily be credited with an additional century of age, for the form and appearance of letters had undergone no marked alteration in all that time. There is in the handwriting, perhaps, more of the formalism of the fashion than of the want of practice of the writer. Needless to say that there is hardly a shadow of connection between the writing of the College cadet and the admiral, and that even the formation of the letters making up the signature, as well as the signature itself, have wholly changed. A little of the formalism of the past also finds expression in the "Believe me to be, Your most affectionate son," which precedes the signature.

Lieutenant Rouse was in charge of the College cadets at this time, and we get a glimpse of the rough-and-ready methods of discipline, as then administered, in the following boy's narrative—

> "Yesterday in school I was out of my place. I went to show a fellow how to do his sum, when Mr. Rouse saw me, and said he must cane me to make me an example to the rest. So he called the sergeant in, who had just lifted up his cane to cane me, when Mr. Jeans, the mathematical master, said, 'Certainly, he ought not to have been out of his place.' Then Mr. Rouse said 'Stop!' to the sergeant, and said to Mr. Jeans, 'Have you anything to say in favour of him?' and Mr. Jeans said, 'Yes, sir; he is ahead of the rest of his class, and he is not one of those idle ones who go out of their seats on purpose to chatter.' So Mr. Rouse waved his hand, and the sergeant went away and there was an end of it. Was not that lucky?"

Key very early found how the old order changes, though doubtless with but little consciousness of what it meant, and that the material was so greatly to govern the moral—

> "The *Boyne*, one of H.M. ships, sunk near Spithead a long while ago, and there is a man who has invented a sort of india-rubber dress with two glass eyes, and he goes down by a ladder and sends up things by a rope. The other day some of us (who were lucky enough to get into the boat, among whom I was one) went to see her blown up under water, but we were too late; but we heard the noise—it was like a distant gun. We did not go back then; we went on to the place, and there saw the man go down. He sent up some copper and a large piece of wood. He looked such an ugly fellow, because he had a thing like a large helmet over his head with two large glass eyes."

As time went on, the really fine talent of the boy, and his powers of self-control, were making their mark in the little group of about sixty youngsters which then formed the Naval College at Portsmouth—

> "The fellows say," he writes in May 1834, "I am sure of the first medal if I try for it—so won't I try!"

He talks philosophically about his conduct, as we often meet boys doing now, as if it was something apart from themselves, like the weather, or anything else involving personal consequences, but beyond human control—

> "But, about my conduct, I *do* get more marks lately than I used to do; but I am glad to say I am not very backward in learning. I have begun astronomy long ago, and am going on with it very well now. I hope my numbers are not worse this half than they were last half. Will you compare them together and tell me in your next letter which are the best; and tell me if I have 'good' written against my name? I know I was short in drawing, but not quite so much as last time."

The date of these letters seems thrown very far back when we meet sentences such as: "If you write to the governor to say what coach I am to come home by, say the Night Rocket, please, as I think it is the best."

The boy continues to make progress, and writes on 13th September 1834—

> "At the last exam. I took four places, and am now the eighteenth in the College."

Again, on 27th October—

> "Last examination I took one place, so I am now first in my class; and, four fellows going away, I am now thirteenth in the College. I am getting on very well now. I expect to go into gunnery soon, and after that into fortification, which is the last thing. . . . I get first and second merit very often now. . . . I keep my journal regularly, except when I was in the infirmary; then I could not, and besides, I had nothing to say. . . . I am in the first division in English, and the last examination in English I took six places. Next Friday is examination; I expect to keep my place in mathematics."

Writing on 19th November again, the boy says—

> "I kept my place in the first class. We have passed into gunnery. I like it very much. I have got my College boat, and it is a very nice one. All my money is spent now, but it is not all *consumed*; there is a College boat and a gig left of it, which I am sure is better than grubbing it."

Boys always have some adjective applicable to all things and to all conditions, as expressive of the extreme of satisfaction. The word at the College in Key's time was "dapper," and there was nothing satisfactory either in esse or posse which to the boy, in writing home, was not "dapper."

The hours were early at the College at this time, as Key says: "In the morning at a quarter before six, when we get up, it is quite dark."

> "I will try all I can for a prize," he writes on 19th November, "but we have joined the class above us. We joined directly we went into gunnery. I have some chance of it, and that chance shall not be lost. . . . The other day, as we went out in the boats, Mr. Rowe thought he would take us to see the three guns which were taken up from the *Royal George*. They were beautiful ones, made of brass, and very large. They have been under water for fifty-two years, yet when the mud was rubbed off them they were quite bright. They had the motto 'Honi soit qui mal y pense' on them. And also the fellow who went down after the guns showed us a rope which was taken up after it had been under water thirty-seven years, and he was using it for his main halyards. Could you believe it? . . . Last Monday week was midshipman's examination, and the senior fellows—of which I was one—had to stay in from nine to three to do sums, and I did all my sums right except one; that is as well as any fellow in the College."

So the months passed in continued progress on the part of the boy, until August 1835. Then his time was up at the College, and it was arranged that he should join the *Russell*, a ship recently commissioned at Sheerness and shortly expected to make her appearance at Spithead. His return to College on 7th August, after the vacation, was but preliminary to his embarkation. He had won the great prize at the College, the silver medal, and was to take with him to sea the full sea-time which was then allowed for collegians, namely, one year. That was to say, that after five years' service in men-of-war, making, with the year allowed for College work, six years, he would be entitled to offer himself to pass the qualifying examination for lieutenant, and to receive his order as mate. Key was discharged from the College, and entered as a College volunteer of the first class on the books of the *Russell* on the 13th August. Next day he was taken on board his ship by Captain Dickens, who was launching his own son, S. T. Dickens, from the College at the same time.

Key had been a favourite with all at the College, and, writing on the 8th of August, details how,

> "On Saturday, Inman[1] took me up to the observatory and showed me a new invented instrument. He likes me better than ever. All the masters and lieutenants, directly they saw me, came and shook hands with me, and asked me how I was."

Thus early had the boy begun to create for himself those friendships which go to build up what in the navy is called service interest, which determine almost surely the rate of advancement, and have at all times been of more importance than any family or political connection—without which, indeed, family or political connection is often powerless.

---

[1] The Rev. Dr. Inman, Professor at the College.

CHAPTER II

THE *RUSSELL*—1835–1839

TO all intents and purposes the *Russell*, the ship in which Key first made acquaintance with the actual naval service, was a ship of the old war time. She had been laid down at Chatham before 1815, but was not launched until 1822. After this she lay at Sheerness until she was commissioned, on 13th July 1835, by Captain Sir William H. Dillon, K.C.H. There was little, indeed, about her which was not of the old fashion. Invention had moved too slowly in the twenty years which had elapsed since the close of the great war, so that the changes introduced into the *Russell* might be counted on the fingers of one hand.[1]

Chain cables, earnestly prayed for by reformers in 1811,[2] had so far made their way that the *Russell's* bower-cables were chain, while her two sheet-cables were of the old type, hempen.[3] No doubt the chain cables were looked on with the greatest distrust by most of those surrounding Key at his entrance into naval life, for certainly twenty years later naval men were found to debate the rival merits of chain and hemp, and it was generally held that hemp bore away the palm so far as regarded the safety of the ship in riding out a gale of wind, though the greater convenience of chain, both for working and stowing, as well as its greater cleanliness, might be admitted. The full convenience was not reaped in the *Russell*, however. Invention had not reached the institution of a chain "messenger" even, and the idea of so arranging the capstan that the cable might be brought directly to it, did not take practical form till ten years later. The capstan of the *Russell* was, in fact, near about the same pattern as that which Raleigh left behind him, and all the inconveniences of the "Voyol" and "Voyol block" (names of the messenger and its leading block still in use), for the removal of which the Society of Arts had offered and awarded its gold medal, still survived.[1]

---

[1] The *Russell* had but the one commission as a sailing ship, namely, that throughout which Key served on board her. After she was paid off in January 1839 she lay at Sheerness till the strain of the Crimean War caused her conversion into one of five high-pressure steam "block ships," as they were called, fitted with reduced masts, and 200 horse-power auxiliary engines. In this form she served the campaign of 1855 in the Baltic; was paid off in 1856. In 1858 she was recommissioned as depôt ship for the coast-guard at Falmouth, and served a series of commissions there till paid off early in 1864. She disappeared from the *Navy List* early in 1865.

[2] See a curious tract of that year, "Naval Economy exemplified in Conversations between a Member of Parliament and the Officers of a Man-of-War."

[3] The ship's log says, 10th August 1835: "Employed splicing cables and cleaning tiers"; and "Coiling hemp cables afresh."

The stowage of water had, in the *Russell*, improved, like the cables, by way of compromise. Of the 255 tons of water which she was capable of taking on board, 204 tons were stowed in iron tanks, according to the present practice, but 51 tons were still stowed in wooden casks, and watering the ship by means of these casks was carried on in precisely the same way as it would have been a century earlier. All through the *Russell's* commission the watering was the same prominently troublesome operation which the letters of all the seamen during the wars disclose it to have been. The simplicity and speed of the system of "watering in bulk," that is, pumping the water from the shore directly into the boat, and then pumping directly from the boat into the tanks on board the ship —due, I believe, to the organising genius of Admiral Sir William Martin—was not in the days of the *Russell* possible, for lack of the necessary pumps. The little portable fire-engine, originally introduced some ten years later under the now almost forgotten name of "Hurles Engine," was the agent of a great convenience unknown to the *Russell*.[2]

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[1] See Chapter XIV.

[2] As early as 1813, however, Mr. Mark Noble had taken out a patent for what he called "a fire-extinguishing chest engine," and successful trials had been made of it for watering ships directly from the shore by means of hose.

She may be said to have been always watering, and when she was not watering herself she was watering some other ship with her boats; and very commonly, when there was any pressure of time, other ships' boats were employed in watering her.

The march of invention had been in nothing slower than in this vital necessity of water for ships. As is well known, Sir Richard Hawkins had on board his ship a distilling apparatus during his voyage to the South Sea in 1593, of which he thus writes—

> "And although our fresh water had fayled us many dayes before we saw the shore [the coast of Brazil], by reason of our long navigation without touching any land, and the excessive drinking of the sick and diseased, which could not be excused, yet with an invention I had in my shippe I easily drew out of the water of the sea sufficient quantitie of fresh water to sustaine my people with little expence of fewell; for with foure billets I stilled a hogshead of water, and therewith dressed the meat for the sick and whole. The water so distilled we found to be wholesome and nourishing."[1]

But notwithstanding this testimony, the knowledge that fresh water could be obtained by the direct and simple distillation of sea water seems to have been lost. In Charles II.'s reign it was proposed to use lime in order to improve distilled sea water, and later other mixtures were recommended as additions. Plans then existed for distillation through the media of growing sea plants, condensing the vapours given off by them. It was not until 1761 that Dr. Lind re-discovered Hawkins' fact that distilled sea water was fit for drinking without any ingredients whatever in addition. Dr. Irving, in 1770, received £5000 reward from Government for introducing distillation experimentally on board ship. In 1811 seven line-of-battle ships, ten East Indiamen, and many merchant ships were fitted with the new "fire-hearths" for distilling fresh water. Yet it all fell through, and the boy Key found himself face to face with nearly the exact conditions as to watering ships which had obtained generally throughout the previous century.[2]

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[1] *The Hawkins' Voyages.* Hakluyt Society. Edited by Clements R. Markham, p. 163.

[2] See the article "Salt Water" in *Burney's-Falconer's Dictionary*, 1830.

The masts, yards, sails, and rigging of the *Russell* were just those of ships which had fought under Lord Howe on the 1st June had been. Students of naval lore of this kind will understand what it all came to when they are told that her futtock shrouds were secured and set up to catharpin legs, and that as late as 1830 the word "necklace" does not appear in the nautical vocabulary. As a consequence, young Key had experience of seeing topmasts go over the side to an extent not common to later knowledge. This minor fact is again a marvellous illustration of the slowness of change in things naval before Key's time, and is a curious foil to the rapidity of change which was to come. D'Arcy Lever—the authority *par excellence* on seamanship in the early part of the century, had, at latest in 1819, pointed out the necessity of securing the futtock shrouds to an iron strap round the mast itself. Yet, sixteen years afterwards, topmasts still disappeared and left the ship a wreck for the want of it.

The armament of the *Russell* was almost precisely what it must have been during the war. She carried on her lower-deck, of which the midship port was only 6 ft. ½ in. out of water, twenty-eight 56 cwt. 32-pounders, 9 ft. 6 in. long. On the main-deck, twenty-eight 42 cwt. 18-pounders, 9 ft. long. On the quarter-deck and forecastle she had two 34 cwt. 12-pounders of 9 ft. long; four 29 cwt. 12-pounders of 7 ft. 6 in. long; and eight 17.2 cwt. 32-pounder carronades of 4 ft. long. On the poop was one 6 cwt. 6-pounder of 5 ft. long.

As far back as the year 1797 the Dutch ships blockaded by Duncan in the Texel had, under the auspices and at the suggestion of the unfortunate rebel Wolfe Tone, successfully fired shell from their guns. At the date we treat of, the common shell, as well as the spherical case shot, or shrapnel shell, were both established as patterns for use with guns. But the change through all these years had not reached the *Russell*. She fired only round shot, just as Duncan's ships had done at Camperdown thirty-eight years before. The powder was placed in the magazine in 460 barrels, most of it probably in loose form, and just as it had been for centuries.

In sea-going qualities the *Russell* was an average ship, easy, moderately stiff, but leewardly. She would heel 5° under royals, 8° when the royals came in, 9° under double, 12° under treble reefs, and 15° with all reefs in. As to her speed, when close hauled in smooth water with royals in she would do 8 to 9 knots; with double reefs in they got 6 to 7 knots out of her; with wind abeam and everything set, she would go from 10 to 10½; and before the wind in a moderate breeze she could make 8 to 9 knots.

In the personnel of the *Russell*, in the ranks, pay, and status of all on board her, there were changes since the war—a few, but the gap to be bridged over between the *Russell's* condition in this respect and that which obtained in a man-of-war fifty years earlier is not noticeable beside the changes which have taken place since. The greatest change which the *Russell* exhibited in this way was the introduction of commanders, second in command. This change was effected in June 1827, and commanders under captains, taking the place of the old first-lieutenants, appear in the July *Navy Lists* of 1827 for the first time. The captain of the *Russell*—Sir William Dillon, K.C.H.—must generally have been called "Sir Bill," for the very first time that young Key writes of him he calls him so, evidently under the impression that he gave his correct title. The commander was Alfred Luckraft. There were five lieutenants — Clark, Evans, Murray, Cumby, and Harvey. The change since the war time here was that Murray came from the *Excellent* as gunnery lieutenant. Then we come on a group of titles which were all changed during Key's service, and some of them at a period when his opinions were competent to influence a decision.

There was the master, afterwards titled navigating lieutenant, staff-commander or staff-captain, and passed out of existence altogether under the burden of his nominal rank. The representative of the title which had connoted the office for centuries was, in the *Russell*, Mr.

M'Lean. The purser added in a few years the title of paymaster to the ancient one, and became paymaster and purser; and then a few years later dropped the old title and remained till now with the new one. The purser of the *Russell* was Mr. Bowman. Dissatisfaction with the title of surgeon did not perhaps exist in 1835, and Mr. Johnston, in the *Russell*, would have remained incredulous had he been told that a generation would arise which drew satisfaction from the names of fleet-surgeon and staff-surgeon, and which took comfort in discarding the prefix "assistant" and calling its junior members surgeons instead of assistant surgeons. Just in the same way, the two mates of the *Russell*, Metcalf and Lindsay, had probably not reached the level of thought which felt that there was something finer in the title "sub-lieutenant" than in the more ancient one of "mate."

The second master, being the rank next below that of master, had, some years before the *Russell's* time, taken the place of the old "master's mate." Some obscurity still hangs over the exact nature of the changes which broke the mates and second masters into two separate classes, as we find them in the *Russell*. Burney, in his remodelling of *Falconer's Marine Dictionary* in 1830, speaks of "master's mates" where Falconer had spoken of "mates," but both describe the officers—there were six in the complement of a first rate—as not only specially under the control of the master, and assisting him in his special duties in looking after the navigation, rigging, and stowage of the ship, but as generally appointed by the "choice" of the master. This would place the mate where the second master was in the *Russell*, and not where the mate was; for he was in 1835 filling a distinctly intermediate rank between the midshipman and the lieutenant, just as the sub-lieutenant does at the present day. However, the spirit of change has, since the *Russell's* time, re-titled the second master as the "navigating sub-lieutenant," and, having fitted him with a name too long for ordinary service, got rid of the name and the thing together and abolished both.

A passion for work, even in the young, is not uncommon; but a passion for whatever work ought to be done at the time that it ought to be done, is perhaps less frequently met with. There is the passion, and the controlled passion; and Key, the boy, at the age of thirteen, seems to have possessed the latter.

To me, boys' letters have an inexpressible charm. It may be held that they disclose nothing of the mind that produces them, or it may be thought that there is no mind to disclose at an early age. Colour is given to either proposition by the similarity of boys' letters in form. A boy is, in the face of a letter, like an apprentice at the lathe. There is the engine of language for the shaping of thought, and there is the mechanical tool to record and mark the idea in the form of words. Both are still somewhat strange to the apprentice, and, whatever the design in the mind may be, the skill arising from use is wanting both in the managing the language and the pen in recording it. So the design can only be intelligible when it is of a simple character. The ideal is not and cannot be there, though it may be latent in the mind of the writer. Yet the tendency

had used the sea, from the captain under whom he last served." He was expected to know the first four rules of arithmetic, reduction, and the rule of three; to write English from dictation, and to construct English sentences. It was recommended that the candidate should know the definitions, axioms, and postulates of Euclid. The age for entry was not below thirteen, and not above sixteen; and it was considered that a service at sea of from one to three years before entry in the College was so important that a preference for entry in the College was given to those candidates who had so served. It was supposed that a boy entering, properly qualified, would complete the education in two years, and the whole stay at College was limited to three years. The time passed at the College was allowed to count as service up to the limit of two years, and then at least four years must be passed in a sea-going ship before the midshipman could present himself for examination touching his qualifications for the rank of lieutenant. The parents of the collegian were called upon to lodge security to the amount of £200, as pledge that the boy would continue to serve in the navy after leaving the College until he should have completed the time necessary to qualify him for the rank of lieutenant. But this was not required if the boy had served two years at sea before entry at the College.

The vacations at the College were but two—four weeks at Christmas and five weeks at Midsummer. Government paid to the credit of each student at College four shillings per day, which went to defray expenses. The boys were allowed one shilling a week pocket-money, and on return from vacation they might have one guinea in their pockets as a present from their friends, but no more.

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> "This last month I have second merit ticket, instead of first, which I got last time. I am what they call here, five months before my time; that is, I have been here three months, and learnt in that time as much as I ought to have done in eight months. I am, in trigonometry again, which is very easy, particularly for me, because I have done it before. I mean to try for a prize at the end of the half, for there is a prize for French, English, drawing, geography, and mathematics. I don't think I have much chance of the French prize, or of the drawing prize, for in our division (the College is divided into three divisions who do different things at the same time, so that, while one division is doing drawing, another is doing French, and the other English) there are two or three fellows who have been in French four or five years, while I have been in it not quite a year. So you must not expect me to get that prize. The drawing prize: as I do not draw one of the *best*, you know; but I think I have some chance (though not much) of the English, geography, and mathematical prize. But nothing can be done without trying, so I will see what I can do. I am going on in drawing very well; I am now doing sepia, and I will soon begin painting. I like drawing very much indeed; I would sooner do it than go out to play, and I am quite sorry when the time comes to put up our books."

There is one difference between Key's and the usual boys' letters which is very marked. His careful remembrances of all the various members of his family, the thoughtfulness for, and of, each of them, and the tenderness of his expressions of affection towards them, are all signs of stronger emotional being than we usually meet in young boyhood. Not only so, but there is a removal of the mind from view of the things seen to the contemplation and picturing of the things not seen, which is perhaps rare at the age of thirteen.

But what little things note the lapse of time! The spring of change which was about to burst forth had not shown itself. Key's letters from College are on square letter-paper, sealed; and their postage from Portsmouth to London was

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But what little things note the lapse of time! The spring of change which was about to burst forth had not shown itself. Key's letters from College are on square letter-paper, sealed; and their postage from Portsmouth to London was

eight times the present rate. Nor would the letters at first glance appear to be only sixty-three years old; they might quite as readily be credited with an additional century of age, for the form and appearance of letters had undergone no marked alteration in all that time. There is in the handwriting, perhaps, more of the formalism of the fashion than of the want of practice of the writer. Needless to say that there is hardly a shadow of connection between the writing of the College cadet and the admiral, and that even the formation of the letters making up the signature, as well as the signature itself, have wholly changed. A little of the formalism of the past also finds expression in the "Believe me to be, Your most affectionate son," which precedes the signature.

Lieutenant Rouse was in charge of the College cadets at this time, and we get a glimpse of the rough-and-ready methods of discipline, as then administered, in the following boy's narrative—

> "Yesterday in school I was out of my place. I went to show a fellow how to do his sum, when Mr. Rouse saw me, and said he must cane me to make me an example to the rest. So he called the sergeant in, who had just lifted up his cane to cane me, when Mr. Jeans, the mathematical master, said, 'Certainly, he ought not to have been out of his place.' Then Mr. Rouse said 'Stop!' to the sergeant, and said to Mr. Jeans, 'Have you anything to say in favour of him?' and Mr. Jeans said, 'Yes, sir; he is ahead of the rest of his class, and he is not one of those idle ones who go out of their seats on purpose to chatter.' So Mr. Rouse waved his hand, and the sergeant went away and there was an end of it. Was not that lucky?"

Key very early found how the old order changes, though doubtless with but little consciousness of what it meant, and that the material was so greatly to govern the moral—

> "The *Boyne*, one of H.M. ships, sunk near Spithead a long while ago, and there is a man who has invented a sort of india-rubber dress with two glass eyes, and he goes down by a ladder and sends up things by a rope. The other day some of us (who were lucky enough to get into the boat, among whom I was one) went to see her blown up under water, but we were too late; but we heard the noise—it was like a distant gun. We did not go back then; we went on to the place, and there saw the man go down. He sent up some copper and a large piece of wood. He looked such an ugly fellow, because he had a thing like a large helmet over his head with two large glass eyes."

As time went on, the really fine talent of the boy, and his powers of self-control, were making their mark in the little group of about sixty youngsters which then formed the Naval College at Portsmouth—

"The fellows say," he writes in May 1834, "I am sure of the first medal if I try for it—so won't I try!"

He talks philosophically about his conduct, as we often meet boys doing now, as if it was something apart from themselves, like the weather, or anything else involving personal consequences, but beyond human control—

"But, about my conduct, I *do* get more marks lately than I used to do; but I am glad to say I am not very backward in learning. I have begun astronomy long ago, and am going on with it very well now. I hope my numbers are not worse this half than they were last half. Will you compare them together and tell me in your next letter which are the best; and tell me if I have 'good' written against my name? I know I was short in drawing, but not quite so much as last time."

The date of these letters seems thrown very far back when we meet sentences such as: "If you write to the governor to say what coach I am to come home by, say the Night Rocket, please, as I think it is the best."

The boy continues to make progress, and writes on 13th September 1834—

"At the last exam. I took four places, and am now the eighteenth in the College."

Again, on 27th October—

"Last examination I took one place, so I am now first in my class; and, four fellows going away, I am now thirteenth in the College. I am getting on very well now. I expect to go into gunnery soon, and after that into fortification, which is the last thing. . . . I get first and second merit very often now. . . . I keep my journal regularly, except when I was in the infirmary; then I could not, and besides, I had nothing to say. . . . I am in the first division in English, and the last examination in English I took six places. Next Friday is examination; I expect to keep my place in mathematics."

Writing on 19th November again, the boy says—

"I kept my place in the first class. We have passed into gunnery. I like it very much. I have got my College boat, and it is a very nice one. All my money is spent now, but it is not all *consumed*; there is a College boat and a gig left of it, which I am sure is better than grubbing it."

Boys always have some adjective applicable to all things and to all conditions, as expressive of the extreme of satisfaction. The word at the College in Key's time was "dapper," and there was nothing satisfactory either in esse or posse which to the boy, in writing home, was not "dapper."

The hours were early at the College at this time, as Key says: "In the morning at a quarter before six, when we get up, it is quite dark."

> "I will try all I can for a prize," he writes on 19th November, "but we have joined the class above us. We joined directly we went into gunnery. I have some chance of it, and that chance shall not be lost. . . . The other day, as we went out in the boats, Mr. Rowe thought he would take us to see the three guns which were taken up from the *Royal George*. They were beautiful ones, made of brass, and very large. They have been under water for fifty-two years, yet when the mud was rubbed off them they were quite bright. They had the motto 'Honi soit qui mal y pense' on them. And also the fellow who went down after the guns showed us a rope which was taken up after it had been under water thirty-seven years, and he was using it for his main halyards. Could you believe it? . . . Last Monday week was midshipman's examination, and the senior fellows—of which I was one—had to stay in from nine to three to do sums, and I did all my sums right except one; that is as well as any fellow in the College."

So the months passed in continued progress on the part of the boy, until August 1835. Then his time was up at the College, and it was arranged that he should join the *Russell*, a ship recently commissioned at Sheerness and shortly expected to make her appearance at Spithead. His return to College on 7th August, after the vacation, was but preliminary to his embarkation. He had won the great prize at the College, the silver medal, and was to take with him to sea the full sea-time which was then allowed for collegians, namely, one year. That was to say, that after five years' service in men-of-war, making, with the year allowed for College work, six years, he would be entitled to offer himself to pass the qualifying examination for lieutenant, and to receive his order as mate. Key was discharged from the College, and entered as a College volunteer of the first class on the books of the *Russell* on the 13th August. Next day he was taken on board his ship by Captain Dickens, who was launching his own son, S. T. Dickens, from the College at the same time.

Key had been a favourite with all at the College, and, writing on the 8th of August, details how,

> "On Saturday, Inman[1] took me up to the observatory and showed me a new invented instrument. He likes me better than ever. All the masters and lieutenants, directly they saw me, came and shook hands with me, and asked me how I was."

Thus early had the boy begun to create for himself those friendships which go to build up what in the navy is called service interest, which determine almost surely the rate of advancement, and have at all times been of more importance than any family or political connection—without which, indeed, family or political connection is often powerless.

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[1] The Rev. Dr. Inman, Professor at the College.

CHAPTER II

THE *RUSSELL*—1835–1839

TO all intents and purposes the *Russell*, the ship in which Key first made acquaintance with the actual naval service, was a ship of the old war time. She had been laid down at Chatham before 1815, but was not launched until 1822. After this she lay at Sheerness until she was commissioned, on 13th July 1835, by Captain Sir William H. Dillon, K.C.H. There was little, indeed, about her which was not of the old fashion. Invention had moved too slowly in the twenty years which had elapsed since the close of the great war, so that the changes introduced into the *Russell* might be counted on the fingers of one hand.[1]

Chain cables, earnestly prayed for by reformers in 1811,[2] had so far made their way that the *Russell's* bower-cables were chain, while her two sheet-cables were of the old type, hempen.[3] No doubt the chain cables were looked on with the greatest distrust by most of those surrounding Key at his entrance into naval life, for certainly twenty years later naval men were found to debate the rival merits of chain and hemp, and it was generally held that hemp bore away the palm so far as regarded the safety of the ship in riding out a gale of wind, though the greater convenience of chain, both for working and stowing, as well as its greater cleanliness, might be admitted. The full convenience was not reaped in the *Russell*, however. Invention had not reached the institution of a chain "messenger" even, and the idea of so arranging the capstan that the cable might be brought directly to it, did not take practical form till ten years later. The capstan of the *Russell* was, in fact, near about the same pattern as that which Raleigh left behind him, and all the inconveniences of the "Voyol" and "Voyol block" (names of the messenger and its leading block still in use), for the removal of which the Society of Arts had offered and awarded its gold medal, still survived.[1]

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[1] The *Russell* had but the one commission as a sailing ship, namely, that throughout which Key served on board her. After she was paid off in January 1839 she lay at Sheerness till the strain of the Crimean War caused her conversion into one of five high-pressure steam "block ships," as they were called, fitted with reduced masts, and 200 horse-power auxiliary engines. In this form she served the campaign of 1855 in the Baltic; was paid off in 1856. In 1858 she was recommissioned as depôt ship for the coast-guard at Falmouth, and served a series of commissions there till paid off early in 1864. She disappeared from the *Navy List* early in 1865.

[2] See a curious tract of that year, "Naval Economy exemplified in Conversations between a Member of Parliament and the Officers of a Man-of-War."

[3] The ship's log says, 10th August 1835: "Employed splicing cables and cleaning tiers"; and "Coiling hemp cables afresh."

The stowage of water had, in the *Russell*, improved, like the cables, by way of compromise. Of the 255 tons of water which she was capable of taking on board, 204 tons were stowed in iron tanks, according to the present practice, but 51 tons were still stowed in wooden casks, and watering the ship by means of these casks was carried on in precisely the same way as it would have been a century earlier. All through the *Russell's* commission the watering was the same prominently troublesome operation which the letters of all the seamen during the wars disclose it to have been. The simplicity and speed of the system of "watering in bulk," that is, pumping the water from the shore directly into the boat, and then pumping directly from the boat into the tanks on board the ship —due, I believe, to the organising genius of Admiral Sir William Martin—was not in the days of the *Russell* possible, for lack of the necessary pumps. The little portable fire-engine, originally introduced some ten years later under the now almost forgotten name of "Hurles Engine," was the agent of a great convenience unknown to the *Russell*.[2]

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[1] See Chapter XIV.

[2] As early as 1813, however, Mr. Mark Noble had taken out a patent for what he called "a fire-extinguishing chest engine," and successful trials had been made of it for watering ships directly from the shore by means of hose.

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The march of invention had been in nothing slower than in this vital necessity of water for ships. As is well known, Sir Richard Hawkins had on board his ship a distilling apparatus during his voyage to the South Sea in 1593, of which he thus writes—

> "And although our fresh water had fayled us many dayes before we saw the shore [the coast of Brazil], by reason of our long navigation without touching any land, and the excessive drinking of the sick and diseased, which could not be excused, yet with an invention I had in my shippe I easily drew out of the water of the sea sufficient quantitie of fresh water to sustaine my people with little expence of fewell; for with foure billets I stilled a hogshead of water, and therewith dressed the meat for the sick and whole. The water so distilled we found to be wholesome and nourishing."[1]

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[1] *The Hawkins' Voyages.* Hakluyt Society. Edited by Clements R. Markham, p. 163.

[2] See the article "Salt Water" in *Burney's-Falconer's Dictionary*, 1830.

The masts, yards, sails, and rigging of the *Russell* were just those of ships which had fought under Lord Howe on the 1st June had been. Students of naval lore of this kind will understand what it all came to when they are told that her futtock shrouds were secured and set up to catharpin legs, and that as late as 1830 the word "necklace" does not appear in the nautical vocabulary. As a consequence, young Key had experience of seeing topmasts go over the side to an extent not common to later knowledge. This minor fact is again a marvellous illustration of the slowness of change in things naval before Key's time, and is a curious foil to the rapidity of change which was to come. D'Arcy Lever—the authority *par excellence* on seamanship in the early part of the century, had, at latest in 1819, pointed out the necessity of securing the futtock shrouds to an iron strap round the mast itself. Yet, sixteen years afterwards, topmasts still disappeared and left the ship a wreck for the want of it.

The armament of the *Russell* was almost precisely what it must have been during the war. She carried on her lower-deck, of which the midship port was only 6 ft. ½ in. out of water, twenty-eight 56 cwt. 32-pounders, 9 ft. 6 in. long. On the main-deck, twenty-eight 42 cwt. 18-pounders, 9 ft. long. On the quarter-deck and forecastle she had two 34 cwt. 12-pounders of 9 ft. long; four 29 cwt. 12-pounders of 7 ft. 6 in. long; and eight 17.2 cwt. 32-pounder carronades of 4 ft. long. On the poop was one 6 cwt. 6-pounder of 5 ft. long.

As far back as the year 1797 the Dutch ships blockaded by Duncan in the Texel had, under the auspices and at the suggestion of the unfortunate rebel Wolfe Tone, successfully fired shell from their guns. At the date we treat of, the common shell, as well as the spherical case shot, or shrapnel shell, were both established as patterns for use with guns. But the change through all these years had not reached the *Russell*. She fired only round shot, just as Duncan's ships had done at Camperdown thirty-eight years before. The powder was placed in the magazine in 460 barrels, most of it probably in loose form, and just as it had been for centuries.

In sea-going qualities the *Russell* was an average ship, easy, moderately stiff, but leewardly. She would heel 5° under royals, 8° when the royals came in, 9° under double, 12° under treble reefs, and 15° with all reefs in. As to her speed, when close hauled in smooth water with royals in she would do 8 to 9 knots; with double reefs in they got 6 to 7 knots out of her; with wind abeam and everything set, she would go from 10 to 10½; and before the wind in a moderate breeze she could make 8 to 9 knots.

In the personnel of the *Russell*, in the ranks, pay, and status of all on board her, there were changes since the war—a few, but the gap to be bridged over between the *Russell's* condition in this respect and that which obtained in a man-of-war fifty years earlier is not noticeable beside the changes which have taken place since. The greatest change which the *Russell* exhibited in this way was the introduction of commanders, second in command. This change was effected in June 1827, and commanders under captains, taking the place of the old first-lieutenants, appear in the July *Navy Lists* of 1827 for the first time. The captain of the *Russell*—Sir William Dillon, K.C.H.—must generally have been called "Sir Bill," for the very first time that young Key writes of him he calls him so, evidently under the impression that he gave his correct title. The commander was Alfred Luckraft. There were five lieutenants — Clark, Evans, Murray, Cumby, and Harvey. The change since the war time here was that Murray came from the *Excellent* as gunnery lieutenant. Then we come on a group of titles which were all changed during Key's service, and some of them at a period when his opinions were competent to influence a decision.

There was the master, afterwards titled navigating lieutenant, staff-commander or staff-captain, and passed out of existence altogether under the burden of his nominal rank. The representative of the title which had connoted the office for centuries was, in the *Russell*, Mr.

M'Lean. The purser added in a few years the title of paymaster to the ancient one, and became paymaster and purser; and then a few years later dropped the old title and remained till now with the new one. The purser of the *Russell* was Mr. Bowman. Dissatisfaction with the title of surgeon did not perhaps exist in 1835, and Mr. Johnston, in the *Russell*, would have remained incredulous had he been told that a generation would arise which drew satisfaction from the names of fleet-surgeon and staff-surgeon, and which took comfort in discarding the prefix "assistant" and calling its junior members surgeons instead of assistant surgeons. Just in the same way, the two mates of the *Russell*, Metcalf and Lindsay, had probably not reached the level of thought which felt that there was something finer in the title "sub-lieutenant" than in the more ancient one of "mate."

The second master, being the rank next below that of master, had, some years before the *Russell's* time, taken the place of the old "master's mate." Some obscurity still hangs over the exact nature of the changes which broke the mates and second masters into two separate classes, as we find them in the *Russell*. Burney, in his remodelling of *Falconer's Marine Dictionary* in 1830, speaks of "master's mates" where Falconer had spoken of "mates," but both describe the officers—there were six in the complement of a first rate—as not only specially under the control of the master, and assisting him in his special duties in looking after the navigation, rigging, and stowage of the ship, but as generally appointed by the "choice" of the master. This would place the mate where the second master was in the *Russell*, and not where the mate was; for he was in 1835 filling a distinctly intermediate rank between the midshipman and the lieutenant, just as the sub-lieutenant does at the present day. However, the spirit of change has, since the *Russell's* time, re-titled the second master as the "navigating sub-lieutenant," and, having fitted him with a name too long for ordinary service, got rid of the name and the thing together and abolished both.

How great in all this the apparent change; how little the real change! The roses of the *Russell* so far, in 1835, are the roses, and nothing more or less than the roses, of the *Majestic* to-day; and, though knowing other names, bear the aroma of a duty-loving service about with them now as then.

How the levelling-up progresses, we are reminded by the fact that in 1835 only the captain, commander, and lieutenants of the *Russell* bore commissions. The other officers were appointed "by warrant," except the mates, who were "by appointment." The whole of the officers of these ranks now serving are appointed by commission, and yet the change is more nominal than real,—not one of the officers then bore the "Queen's commission" as officers in the army do; the difference between a naval commission, warrant, and appointment is a difference in a form of words, and perhaps of the substance on which the words are written. But even here there is a difference betwixt then and now. No officer in the *Russell* bore a commission from the Admiralty in "Her Majesty's Fleet." It was more than a score of years later before officers' commissions admitted on the face of them that the navy was a permanent service. Traditional custom, some centuries old, recognised no navy that was not in commission afloat, and all the commissions, warrants, and appointments of the officers of the *Russell* were valid only as to the *Russell*, and ceased to be valid when she ceased to bear the pendant. Now the reasonable change is that one form of words, and one substance—parchment, or an imitation—on which the words are written, constitute the warranty for the rank and position of the officers called commissioned officers, and create its validity, not in any particular ship, and limited to her as to a place and a time, but generally, in "Her Majesty's Fleet." The order to serve on board any particular ship is a simple letter, and for all ranks the same in form. Out of the modern desire for levelling up has therefore sprung a reasonable and useful simplification of method, and a recognition in form, of the existence of a permanent naval force which followed the fact, at the long interval which less bustling times allowed.

The midshipmen were of two classes in the *Russell*—ordinary midshipmen, who had entered the service direct as volunteers, first class, and had risen to the rank of midshipmen, of whom there were nine; and two "extra College midshipmen," boys who had left the College before Key, and had probably served in some other ships. There were two volunteers of the first class, and two College volunteers of the first class—Key, the senior, and Dickens, who passed out and joined the *Russell* with him. These volunteers of the first class changed their titles to "naval cadets" before ten years had elapsed, and they still remain as such.

There was then no rank corresponding to the present one of "assistant paymaster," the rank immediately below that of paymaster. Later on, the rank of "passed clerk" was established, and this afterwards took the present title. The rank was analogous to that of mate, the latter consisting of officers who were qualified, without further service or examination, for the rank of lieutenant, as the former were in the same way for the rank of paymaster and purser. In the *Russell* were two clerks; and, as another example of the slightness of the change which the course of time had wrought, the clerk's assistant (the title is now transposed and has become "assistant clerk") of the *Russell* was rated an A.B., and his name appears amongst the ship's company.

The rank of "master's assistant" and of "volunteer of the second class" had been established by an Order in Council of July 1824. The ranks corresponded, in the line of the master's duties, to those of volunteer of the first class, and midshipman, in the line of the lieutenant's duties. There were two master's assistants in the *Russell*, but no volunteers of the second class. The titles were in later years converted into "navigating midshipman" and "navigating cadet," after which entries ceased in 1872 and the ranks and titles gradually disappeared. The title of "schoolmaster," which had been borne for a long course of years by the officer appointed to instruct the midshipmen and other junior officers, was still borne by that officer in the *Russell.* Following the analogous changes in the title of "purser," the "schoolmasters" became "naval instructors and schoolmasters" in 1840, and two years later dropped the "schoolmaster" altogether and took up their present title of "naval instructors" only. The list of officers is concluded by the names of a captain and two second-lieutenants of marines, titles which have remained without change till to-day.

The whole complement of the *Russell* was 520 souls; and beside the 39 officers already enumerated, there was, when young Key joined, a ship's company comprising 33 seamen petty officers, 13 civil petty officers—as they might be called—154 able and 76 ordinary seamen, with 3 landsmen. The rating of landsman was a survival of the practice of entering a certain proportion of grown men in the complement of the ship, who represented seamen in no sense, but added so much muscular power for the working of the sails and guns. There were 45 boys, divided into the two divisions of first and second class, which latter disappeared from sea-going ships when the boys' training system was first introduced in 1853. The function of the second-class boy in the *Russell*, and till the change above noticed was made, was to act as servants to officers of wardroom rank, and to warrant officers, while in battle they assisted in the supply of powder to the guns. It resulted from this system that there were only six domestics proper on board the *Russell*; and one of the greatest, as well perhaps one of the gravest, changes made in the navy, followed the training system, in introducing quite an army of domestics who were not disciplined to the art of war, and are now superseded by marines. How marked the change is in other ways we may note by recording that there were only twelve artificers of all classes on board the *Russell.* The detachment of marines was a large one—124 men beside the officers.

In the uniform worn by young Key and his shipmates, and in comparing it with that of the present day, we have another curious instance of a modern fallacious belief. We have already noticed the fulfilled desire of levelling up by the creation of new titles, under the erroneous impression that a name has some signification apart from that which it connotes, and that a new title will carry with it some special honour though the actual relative place and duty are unchanged. In the uniform of the different ranks of officers, and its changes during Key's naval life, we have the action of the erroneous belief that in an organisation where gradations of rank or command must be marked by dress, rank may be raised by clothing it afresh. The uniform worn by the *Russell's* officers and by the rest of the navy had been settled in June 1833; and it is amusing, if not a little humbling too, to observe how pressure from rank below, which is modern, has been continually adding decoration to itself, which has necessitated further decoration to the ranks above. Distinctive rows of lace on the cuffs is an old method of exhibiting outwards the place of the wearer in the naval catena. When young Key joined the *Russell*, the admiral of the fleet wore the four rows of lace on the cuff which have now descended to mark the place of the captain, and the rear-admiral wore the single stripe which now marks the chief boatswain. It has been the same throughout. The captain of the *Russell* wore on his epaulettes the devices of crown and anchor which are now the distinctive badges of the commander. The commander of the *Russell* wore no badges on his epaulettes, neither did the lieutenants, but the latter officers wore only a single epaulette on the right shoulder.

Key's own dress differed hardly at all from that of the naval cadet in the *Britannia* of to-day. The great feature of difference was the wearing on all State occasions of a plain round or sort of chimney-pot hat with a cockade in it, and a gold twist down the side. Naturally, the volunteer's hat was a difficulty to him, for it was not very easy to preserve it intact where confined head space, confined stowage room, and boisterous company combined in a sort of conspiracy of damage. And the young aspirant's letters are sometimes occupied with details as to the woes and adventures of the hat. All ranks wore it on board ship as an alternative to the gold-banded, peaked, and flat-topped cap. Before ten years had fully passed, convenience had beaten custom; and though the round hat and the "lightning conductor" were still authorised articles of uniform, it was rare indeed to see it worn. But, as a midshipman, Key wore a sword instead of a dirk, and in December 1838 he thanks his sister for sending him "the prettiest cocked hat" he had ever seen, which he wore on State occasions, such as the levees of the Queen of Portugal.

The rules about wearing plain clothes or uniform, the source of chronic disputes and of cycles of fashion, were not in 1838 much apart from present custom. Key writes in November of that year: "The next time I come to sea, by your leave, I will take a suit of plain clothes to sea, as I would have found them very useful, as nearly everybody goes on shore in plain clothes, and, in going out to parties, etc., it looks odd being the only person in uniform in the room."

It was on these lines that the sea-world to which young Key was introduced on the 14th of August 1835, and of which a fortnight's experience led him to pronounce, as the first thought of his heart in his first letter home from the first foreign port he had seen the anchor let go in, that "he never was so happy in all his life."

The *Russell* had had a somewhat momentous and exciting existence during the month which she had passed in commission before Key joined her, and she was not without a very early hint that she and her like were to pass away before a new race of warships, destined to upset and alter everything that then seemed most permanent. Though the *Russell* sailed out of Sheerness harbour when she was complete for sea, she was accompanied and attended on by His Majesty's steamer *Firebrand*. And she had no sooner cleared the harbour than her officers and ship's company were solaced with the entertainment which in the then state of moral tone was a necessity. The gratings were "rigged," and a marine received two dozen lashes for leave-breaking. The proceeding was a sort of overture to a long series of performances of a similar but fuller and more satisfying character. "Spare the cat, and spoil the seaman or marine—but especially the marine," might have been run round the *Russell's* wheel, after the manner of the ship's motto, with singular appropriateness, for very few marines spent the commission in the ship without thoroughly understanding what it all meant, and what the sensation was like. The ship was very often in and out of harbour during her term of service, and the practice was to clear off scores, and shake off the lethargy of smooth harbour residence by a good flogging match the first time after clearing the land. And while there were generally bluejackets in a condition for the exercise, it was certain there would be a large batch of marines. It was then the custom of the service, and no one minded it much. There was a certain art in being flogged which was taught on the lower-deck, and a fine marine in good practice would take four dozen with a calmness of demeanour which dissociated the operation of the lash from the idea of the infliction of pain by way of punishment and warning, and connected it up in people's minds with any of the ordinary and routine —or inevitable—operations necessary to be carried out on board ship, such as scrubbing decks or loosing sails to dry. Key must have fallen into this view of it very early, for he had certainly seen twenty-two men flogged before he had spent many days over six months afloat.

Not many hours after this first exhibition of the machinery of discipline, the hook of the leading block of the fish-fall gave way when all the men were on the fall. Two men were killed outright, two mortally wounded died in a few hours, and five others were badly hurt, so that what with flogging and funerals the *Russell* could not have been, when Key joined her, thought to be on the high road to pose as "a happy ship." But a beat down channel, and the ascertainment that their ship was not a sluggard when she was pressed; and all that wonderful elation which comes, God knows how! to the sailor when he has done sighing as sinks his native shore, and knows for certain that it will not rise again for a year or two, no doubt produced the usual effects; and when the ship, after looking in at Santander, anchored in Corunna harbour on the 27th of August, no doubt there were many beside young Key who "never were so happy in all their lives."

The *Russell* was attached to the Lisbon command, then held by Admiral Gage, who had his flag flying in the *Hastings*, just such another ship as the *Russell* was herself, and destined like her to be converted into a feeble steamer in her old age, and to serve beside her in the Baltic. These were the days of the great Carlist rising in Spain, and of the Spanish Legion under De Lacy Evans; and a considerable force of British ships was continually on the Spanish and Portuguese coasts, passing from port to port protecting British interests, and not infrequently offering a safe asylum to loyalists who had been driven from their posts and fled with their lives in their hands from their political enemies.

These were the duties of the *Russell* for about a year, and it was in assisting to carry them out that he received his first actual naval training.

He suffered under certain apparent disadvantages, which it is quite possible to conceive were really just the opposite. Those natures which start in life with everything their own way, to whom conscious effort is hardly known, whose environment exactly suits them, and who find neither insuperable difficulties before them, nor wearing drags behind them, are not best placed in this world for the achievement of distinction. I recollect an old and very amusing medical skit called "The Autobiography of a Stomach," wherein the philosophy of eating cheese after dinner was explained. The author asserted that cheese was highly indigestible, and the stomach, telling its own story, confirmed the fact, and declared that when the cheese came down it was at once assured that it must exert all its powers to get through the digestive duty. In exerting this extra power on the cheese, it finished the less difficult work on the dinner with hardly consciousness of exertion. The moral would seem to be, that a nature contending with a difficulty inherent in itself, or immediately present in its surroundings, is strengthened by the efforts which are forced on it; and, in the necessary exertion of will and determination to overcome certain specific enemies, masters its whole position and dominates all its circumstances in such a way as to mark its position much above the average.

Key suffered from a very bad stutter, which he subdued, but never wholly overcame; and he was troubled, as a boy, with persistent complaints which ought in ordinary course to have passed away with his childhood. But I strongly suspect that he was not the worse of these things, though all his friends must have regretted them.

It appears that the collegians did not wear uniform, for young Key, in his first letter from abroad, describes with frankness how glad he was to get his "uniform on to walk about in." He tells how kind the midshipmen were to him and his brother College volunteer, Dickens, when they got on board. He has not much time, he says (was there ever a boy known who had much time?),

> "Having to keep watch twelve hours out of twenty-four [he had not quite mastered his actual watch hours], besides school three hours, writing logs, watch-bills, station and quarter-bills; nevertheless, I pick up a few minutes to write this. We have excellent messmates and a beautiful mess. We have twice as good a mess as I have ever had at any school or college. Well, to return to where I left off. Papa and Henry went down into the gunroom, our messroom, and after jawing with the captain he went away. I forgot to tell you, the night before this I slept on the deck down below, not having my hammock yet; and, as I had left my key on shore, I was obliged to sleep without sheets, *i.e.* between two blankets—*rather* uncomfortable, you may fancy. When papa, etc., went on shore, he took away my old hat and said he would bring me a new one in the afternoon, saying that we should not sail that day; but he was out in his reckoning for once, for we sailed that afternoon, so I have no hat. Well, we sailed, and I was not half so unhappy as I was at going to college, school, etc., and I know the reason why. Because I did not bid you good-bye, so I do not think about it so much. In a few days we saw Ushant, then went through the Bay of Biscay till we came to Santander, where we communicated with the *Castor*, which was lying there, and we saw a brig sailing somewhere near there, and we showed our colours, but they would not show theirs, so we fired a shot at them (a ball, mind you) and sent up her colours pretty quick, you may fancy. They were Spaniards from Santander. We came to Corunna. On our way the captain asked me to breakfast with him in the cabin; and the commander, seeing me keep my watch so well, asked me to dine in the wardroom. I like the commander very much, and I think he likes me. . . . I have been sick only once, and then all the fellows were very kind to me."

After a short stay at Corunna the *Russell* went on to Vigo, and then joined the admiral's flag in the Tagus on

12th September. She was back to Vigo and Corunna, and finally returned to Lisbon on 11th October. Here we are reminded of the accidents to which the warship is heir, whether she be of wood, iron, or steel, and whether she be dependent on wind or coals. According to the master's orthography, the *Russell's* mizzenmast was found to be "rotton," and the only cure was to get it out and put in a new one. The whole process was an example of the seamanship and method of the war time which had passed and gone, and was never to return. But to the young Key, and to all in the ship, the coming days were hidden, and the rigging of sheers on board, the unrigging of the old mast, the lifting and hoisting out; the hoisting in, placing, staying, and rigging of the new mast, represented a series of operations which underlay all our naval glories and prepared for them. The defect in the mast was discovered on the 16th of October; the new mast was made on shore by the artificers of the ship, and was in its place on board on 6th November.

An almost forgotten feature of the naval service comes into prominence during the *Russell's* stay at Lisbon, in the constant arrivals and sailings of the packet-brigs. In those days the foreign mail service was conducted by the Admiralty. Falmouth was the English port of arrival and departure, and a bustling useful school of seamanship was there developed. The irregularity of the arrivals at Lisbon was no doubt a thing to be calculated on, but young Key moans sometimes over the delay of his home letters in consequence. Lisbon, however, was a sort of postal paradise for men-of-war at that time, compared with other ports. Key, writing from Ferrol in March 1836, declares that the ship has had no outside news of any kind for two months, and letters from England have taken eleven weeks to reach him. Ferrol was in time, in those days, nearly twice as far from England as Hong-Kong is now.

Whether the *Russell* was at all an exceptional ship it may be difficult to say, but it is not easy to avoid being struck with the floggings, discharges, and escapes of men from her boats when on shore. Men ran in this way singly and in groups, and often seem not to have been discovered, though sometimes they were, as in the following instance, which young Key describes—

> "Four of our men deserted at Lisbon, and a midshipman and the master-at-arms were sent after them. They found three, and as they were returning to the boat the mid. saw the other fellow, who scudded directly. The midshipman ran after him, and came up with him; drew his sword, and declared he would stick him if he resisted him. So the man came down to the boat very quietly. They were all flogged."

The number of deaths, too, taking place on board strikes the modern eye as remarkable: there were nine deaths on board in her first year's commission.

The vessels of the Lisbon command were all kept pretty well on the move, and the *Russell* spent her first year in passing continually from port to port between Cadiz and Ferrol. But amongst the constant arrivals and sailings of the *Malabar*, *Talavera*, *Endymion*, *Pearl*, and others, the rare appearance of "His Majesty's Steamer *African*"—a despised innovation—indicated what was coming to minds not at all ready to consider the indication.

Key's life all this year was one of almost unbroken happiness. The genial temper, and bright appreciation of all that was pleasant in his surroundings, added to his steady attention to all his immediate duties and his consciousness of the necessity of learning, stood him in good stead. He had been placed in charge of the captain's galley, and was consequently much with Sir William Dillon, who showed his appreciation of him by various kindnesses. Now it was a trip to Seville, with which Key was delighted, and seems to have been especially struck by many of Murillo's pictures which he saw there. At Seville there was a bull-fight, which hardly pleases the tender-hearted English boy, whose only remark upon it is a sentence of commiseration for a wounded horse, "poor thing."

At another time his captain, during carnival at Ferrol, takes his galley's midshipman to the Consul's, has him dressed up as a girl, and takes him to a masquerade, the captain himself in a domino. Some of the officers of the *Russell* who were there in uniform, paid considerable attention to the supposed English lady, and one lieutenant in particular was pressing in his desire for a dance. "But I refused," says Key, "because my dancing would show that I was not a girl."

Key was very active, and spent much time aloft by preference. He could easily beat most of his messmates in a race over the masthead. But still he was not strong, and suffered badly from what he calls "the old thing—a sick headache." So badly that he spent some time formally laid up in the "sick bay."

He was much struck with the departed naval glories of Spain, as evidenced by the ruin of Ferrol—

> "I wish that you could come to Ferrol and see the dockyard, harbour, and everything. The harbour has such a small entrance [the small entrance, the remembrance of which, according to Alison, threw Napoleon into one of his paroxysms when he supposed that Villeneuve had passed within it], it seems as if a line-of-battle ship could hardly get in, and besides, the entrance is four miles long, and then widens, like a bottle, to a very large harbour, and very deep, for if we chose we might lie close alongside the town. The basin is an enormously large one, but it is all going to ruin, and so are the docks, none of them having gates. There is a rope-walk longer than ours at Portsmouth, but the roof is all falling in, and no one at work there. Then there is a beautiful large sail-loft built of stone, and the boat-slips are all falling to ruins—everything being built of granite; and in the walls round the basin, and all the jetties, are enormously large copper ring-bolts; beautiful they are."

Incidentally, Key mentions occurrences which show how loosely "The Queen's Regulations and Admiralty Instructions" then sat upon the shoulders of officers in command of ships—

> "I told you before that about two months ago Maitland and Forster went to Lisbon for the purpose of going on leave to England,—on the captain's leave,—and a short time after Alston and Kynaston went to Lisbon on the same purpose. Now the captain cannot properly give leave to midshipmen without the admiral's leave; when they got to Lisbon, the admiral somehow or other found it out, and he sent them all four on board the *Pearl*, with orders for Captain Nurse to take them to Ferrol the first opportunity. Captain Nurse gave them leave to go ashore every day, and one night Alston and Kynaston had leave to stay ashore till 11 o'clock. Well, 11 o'clock came; and they did not come on board that night. The next day Captain Nurse received a letter from a Spanish officer to say that he had these two midshipmen in jail, and we afterwards heard that these two, along with a Yankee midshipman, had come down to the landing-place to get a boat to go on board, and there was a sentry there. So they (up to any lark) agreed that Kynaston should kneel down on his hands and knees behind the sentry, and Alston should shove him over him, and then all three scud. But Alston shoved too soon, and the sentry sang out for the guard.

Kynaston jumped off the jetty into a boat. Alston and the Yankee ran. Some of the guard declared they would fire into the boat; so Kynaston was obliged to surrender, and the others were caught, and all three turned into jail. The next morning the admiral released them, and the *Pearl* sailed with orders to touch off Ferrol and send those four and the mail bags in to us, and proceed to Santander with stores for the *Castor*. She touched off here, and only sent Maitland and the mail in to us, and the other three went on to Santander, but will come back here after they have given the *Castor* her stores."

The *Russell*, in her first year, was not without those startling accidents so infrequent of later years, but which, in their suddenness and unexpectedness, made up some of the romance of service in the days gone by. She started with that bad accident which I have described, and went through a succession of minor ones inseparable from navigation under sail; and these Key relates as follows—

"One night, a long while ago [at Ferrol in January 1836], it was thundering and lightening tremendously; it was my six to eight watch,[1] and I was standing abaft under the poop awning, and I happened to be looking at the mainmast, when it lightened, and I heard a tremendous noise, and I saw several sparks of fire on the mast about six feet above the deck; the noise brought every officer and man on the ship on deck, and a great many sang out, 'The ship is on fire!' The next morning the only thing we could see was a little black mark, and the carpenters examined the mast, but there was nothing the matter with it."

One July night, just outside Vigo, a heavy squall taking the ship aback, left her a wreck in a couple of minutes, with loss of all her topgallant masts, her main and mizzen topmasts, her main topsail and topgallant-yards, and many of her principal sails.

But before this, the indications we have seen in the "rotton" mast began to culminate in the general discovery that the ship was unfit for sea, and must go home for new masts and rigging and a thorough refit. She accordingly found herself cleared out, dismasted, stripped, and in dock at Devonport in August, not being again complete for sea till 12th October. They evidently took things more easily than we do now; it would be a long time before we heard the end of a ship in her first commission coming home from her station and passing into dockyard hands for four months, while the work was done on her which ought to have been done before she left England.

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[1] The "last dog-watch," 6 to 8 p.m.

It is not possible to avoid being struck with the extraordinary amount of flogging that went on at this time. We have a seaman flogged on 30th July, five seamen and one marine on 12th August, one seaman on 17th August, three seamen and one marine on 23rd August; and then, the ship getting to sea in company with the *Maiden* and *Partridge*, the arrears were cleared up on the 17th October by the flogging of five seamen and seven marines. And yet it may quite have been that the discipline was not worse then than it is now. The offences for which men were then flogged, and so finished with in ten minutes, are the same which are now met with the more prolonged but not less severe punishment of from three to fourteen days' confinement in a cell on board, or the prolonged and wearying, if less severe, confinement in a prison on shore. The sentiment of the age has turned against corporal punishment as an engine of discipline; but where severe punishment is necessary it must ever remain a question whether, apart from the sentiment which has made it impossible, the ten minutes' severe bodily pain applied outwardly has not much to recommend it as an alternative to a system of pain applied inwardly by means of partial starvation and incarceration. It may quite be that the outrage on sentiment, had it continued, might have hindered progress upwards towards a moral condition amongst the private men of military services, which has been long found amongst officers, and which rests on devotion to duty and on the spirit of honour, loyalty, and truth. But neither the boy Key, nor the seniors by whom he was surrounded, could possibly have given voice to thoughts of this kind, in familiar and almost daily contact with a practice which then stirred no sentiment whatever.[1]

The *Russell* first went back to the Lisbon station, where in the continued revolutionary and Carlist times she found occupation in landing armed parties for the protection of the Queen of Portugal and of her palace from the attempts of her dissatisfied subjects. Key characterises the Lisbon station as "the horrible coast of Spain again," when learning at Devonport of their probable return thither. He had made some endeavours through his father towards passing into a smaller ship,—the *Conway*,—under the impression familiar to all youngsters, perhaps in all times, that a "small craft" is the only ship to learn the profession of a sailor in. He also had a short leave, his father being in London, and the rest of the family being at Hemel Hempstead in Herts. A coming change is noted in the journey of Key's captain, Sir William Dillon, voyaging from Plymouth to London by the *Brunswick* steamer, in preference to the coaching journey which young Key himself had just performed.

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[1] Key, as we shall see, lived to be a principal agent in abolishing corporal punishment.

Staying at a friend's house—the Soltau's, about seven miles from Devonport—young Key describes with intelligence and interest some electrical experiments which were exhibited, especially one showing how cannon could be fired by that means. It is a striking reflection that nearly half a century later the man should have found himself putting into practical use that which the boy had admired as a toy. Just at this time we get an indication of the manner in which one side of Key's character was developing. In requesting his mother to send him Paley's *Evidences of Christianity*, the midshipman was showing how, through all the light and boyish thoughts which thronged his mind, the solid and the serious were gaining a place which they were destined to hold.

At the close of 1836, the *Russell* being still at Lisbon, young Key was getting most useful training as signal midshipman, a sort of training more calculated perhaps than any other to sharpen the wits and impress the habit of presence of mind. He writes in December—

> "The people ashore here are very quiet now, but we expect them every minute to take up arms against the queen, therefore we are obliged to be in readiness for anything of the sort. The queen, it is said, has behaved shamefully to us. She declared *afterwards* that we had landed our marines without her consent. As I am in the signals now, I am obliged to be on deck all day from daylight to sunset, and except I can get leave I cannot get down below to draw, write, etc.; and I have lately taken a great liking for drawing. But it is very seldom that I can get down. I am looking out for the packet very anxiously. She has been

a fortnight out, and I expect a letter by her. Just before sunset this evening we saw a brig outside, which we expect is the packet. To-morrow morning will show us what it is. . . . We expect to leave this place for the coast of Spain before long. I hope not, because I like this place much better. I have not been to the opera once since we have been in here. I hear that *William Tell* and *Norma* are both performed very well indeed. I have seen *Norma* performed the last time that we were here, but I should like to see *William Tell*. . . . I have taken a great passion for drawing, and I hope it will continue. I can find very little time for it. . . . The commander is in an excellent humour with me to-day, because I made out the packet last night, as we were the only ship in the squadron that saw her, and I was the only one on board this ship that saw her; therefore the old commander gave me great credit (which, between ourselves, was due more to my glass than myself). I have not made much use of my sextant since I have been out, but I keep it in good order and examine it very often. . . . I am taking sketches of all the different sorts of boats here, as there are a great quantity, and some of them very pretty. . . . I think our ship is a beauty. She gets handsomer and handsomer every day. We are the pride of the Tagus."

Key's health began to give way a good deal at the beginning of 1837. He suffered badly from rheumatism and cough, and was bled according to the medical view of those days, "which he did not mind much." "The commander," he writes, "is very kind to me. He will not *allow* me to turn out early of a morning, or to go away in boats late at night." He was a careful reader of James's *Naval History* at this time, and sends his volumes home to be bound, as in their paper covers he is afraid to subject them to the rough usage of the gunroom. Always his pride in the ship, and his happiness in her, shines out of his letters. It does not seem that he was ever in the usual troubles of midshipmen with the commander. Though he evidently says in his letters all that comes uppermost in his mind, there are no recitals of the injustice of his superiors, and the miseries of "watch and watch," stopped leave, and the masthead. Meanwhile the minuteness of his inquiries about every member of the home circle, and the constant flow of expressions of endearment, reveal a nature of extreme affection and warmth of remembrance. But he is very sharp also. The *Linnet* brig, one of the packets, he had seen in Lisbon sixteen months before, and not since anywhere; but when she reappears on the distant horizon he recognises her at once, and against the verdict of all round him proclaims her identity, which is confirmed on her arrival.

As an incidental light on the state of the navy in 1837, we have Key writing thus on the 4th February—

"The promotion is come out at last, and our senior mate (C. W. Lindsay) is made; he deserves it; he has been nearly twenty years in the service, and only just made lieutenant."

The fashion that comes round in disease, as well as in everything else, is marked by such a note as this—the ship lying in the Tagus in February—

"The influenza is very bad in the squadron; the *Pembroke* has 220 on the list [the sick list], and the other ships have each about 100, while we have only 20." The boy is still sick himself with rheumatism, but says: "I shall be off the list in a day or two, and then I shall write to A——, but at present I cannot—it tires me so. At one time my legs were so bad that if I wanted to get out of my hammock I was obliged to be carried by two men; and one of my messmates who had come to see me said, 'Oh! if your father or mother were to see you now, what would they say?' I have often thought the same myself. Oh, mama! you do not know what pleasure it gives me to hear from you! Because, out here, I have got nobody to talk to about home, and it is so pleasant talking to you and hearing all about my dear brothers and sisters, and also dear papa; while you, at home, have got plenty to comfort you, I have no one. . . . I have just turned out of my hammock, and Dr. Johnston is come up to see the sick men. I am confined to the sick bay, therefore it is very dull for me all day, and you do not know how I enjoy writing this. . . . I put anything in it to fill it up, but I have no news to tell you, having been confined to the sick bay for nearly three weeks. . . . I am getting quite tired now, and my hand shakes most horribly."

His hopes of speedy recovery were not realised, for on March 4th (a month later) he writes—

"Dr. Johnston has just told me that he is writing to papa about sending me home on sick-leave for a month or two, and therefore I am writing for the same reason. I am still confined to my hammock; and while I am writing I have got my desk on my knees, which makes them ache most horribly. Do not tell anyone that there is any chance of my coming home, but you and papa keep it to yourselves, and we will surprise them all. A short stay at home will make me quite well, but I am sure that you will be surprised when you see me. I can nearly span my legs all the way up, and my arms, I am sure, are not so stout as M——'s, and even my fat face has lost its flesh. I am treated so very kindly by everybody, I have everything I want; and even the old commander (Luckraft) comes forward very often to see me, and he wants me to remain in his cabin altogether. I have just taken my medicine, and I am so sick that I can hardly write; but as the packet sails early to-morrow morning I must finish this to-day. . . . I forgot to tell you that since I have been sick I have begun to study botany; I like it exceedingly. I have collected and dried a few specimens. One of the assistant surgeons is teaching me; he goes ashore and brings off flowers, and I find out the names and dry them. I think I shall be nearly a match for A——, and so I should advise her to look sharp. I have just had my dinner, which consisted of one boiled potato, of which I ate half. . . . Oh, dear! I am so tired."

As throwing light on the customs of the service then, and of the cost of travelling when steam passenger-ships were just beginning to put in an appearance, the following is useful—

"I just write to you in haste to say that you may expect me home before long. The way Dr. Johnston is going to do it is to get me sick-leave, and send me home in one of the steamers, right up to London at once. That will save the trouble of getting round from Falmouth, as I should be obliged to do going in the packet. The passage money in the steamer is £15 up to London, provisions included [it is now only £8]; the passage that way will be much quicker and much more comfortable."

But a few days later (15th March) the prospect wholly changes—

"The last letter that I wrote was very hurried; but since that the *Talavera* arrived here with 12,000 stand of arms for us, and orders for us to proceed to Cadiz, then up the coast of Spain to Gibraltar and Barcelona, and then proceed direct to Malta for good. Directly I heard that, I decided on not going home (although I have got sick-leave from the admiral), because going up the Mediterranean is a chance not to be lost. In health I am improving fast, and by the time I get to Malta I shall be as well as ever I was. But if, after I have been a short time at Cadiz and Gibraltar, I find myself getting no better, then I shall go home; but I am sure that I shall be quite well soon. . . . I am so glad that we are going up the Mediterranean; it will be so pleasant."

As showing the bent of the character, the foregoing letter is a sign-post. It is impossible but that, with the warm home affections which all his letters disclose, young Key's heart must have been bounding with delight at the home prospect before him. But on the other side was the desire to fulfil the rôle on which he had entered. Perhaps it would be incorrect to say that he chose to give up the delight of going to his home from a sense of duty, though a sense of duty must have been part of the associated complexities which determine action. Neither could it be said that the prospective charm of new scenes alone swayed him. An unconscious arrangement of the syllogism is probably the explanation. The object of my going home is that I should get well enough to continue the career in which I have entered. The change of scene and climate may affect that object without withdrawing me even for a time from the pursuit of my career. Therefore I give up my home prospects and stay where I am. The choice was that of a character of growing strength, already looking beyond the moment, and wholly disinclined to sell its birthright for a mess of pottage.

The *Russell* sailed for Cadiz with her cargo of arms for the Spanish loyalists on 16th March, and sailed thence for Malta on the 24th. Key's next letter is from Cadiz—

> "Here we are, safely anchored in Cadiz. . . . I write to let you know how I am. At present I feel *quite* well, only rather weak of course, but still I am stronger than I was when I wrote last. The *Pique*, Captain Rous,[1] is lying here, and I believe is going home. She is a very fine frigate, and in crack order.[2] As I am so much improved in health, I do not think that it would be any use going to England, therefore I have decided in going to Malta along with the ship. We have been two days on our passage round, and have had a very pleasant one. Last night Metcalf, one of our mates, got his promotion. Everyone is so glad of it. He was liked by everybody. I have written very often lately, because I know that you would be very anxious about me. . . . I hope that we shall have a nice passage round to Malta; I am not sure whether we touch at Gibraltar or not; I hope so. Anyhow, we pass within sight of it, and I shall take a sketch of it if I possibly can. . . . When we were coming round from Lisbon to Cadiz, the captain gave the men plenty of exercise reefing topsails, etc., because we have plenty of that sort of work up the Straits. The signal midshipman's berth will be no sinecure then, I am glad to say. We shall be signalising all day and all night long; that is just the sort of work I like,—plenty to do, and I shall never get ill. It's only when I am idle and have nothing to do that I get unwell. I must always be moving,—you know that."

The *Russell* passed straight on to Malta, only heaving-to to communicate with Gibraltar, and arriving there on the 8th of April. Sir Josias Rowley was then commander-in-chief in the Mediterranean, with his flag flying in the *Caledonia*. She was at Malta when the *Russell* arrived, as were also the line-of-battle ships *Vanguard*, *Revenge*, and *Barham*, with the smaller ships *Carysfort*, *Sapphire*, *Dido*, and *Rapid*.

The increased part the steamers were beginning to take in naval affairs was plainly indicated by their constant appearances at Malta. The *Medea* and the *Firefly*, the

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[1] Afterwards the celebrated leader on the turf.

[2] Entering the service as I did ten years after this date, the *Pique's* reputation was still a standard topic of conversation amongst us.

Volcano and *Confiance*, all well-known steam vessels for years after this, were constantly putting in their appearance, and taking part, and a predominating part even then, side by side with the smaller classes of sailing vessels, which they were destined to dispossess altogether in their preliminary attack on a sailing navy.

I may let Key tell his story up to the 19th of May, dating from Malta—

"I think the last time I wrote you a regular letter was at Cadiz, when I was recovering from my illness. I told you the other day that I was quite well, therefore I need not tell you again. We left Cadiz on the 24th of March, and arrived at Gibraltar on the 25th. We did not anchor there, but merely hove-to inside the bay to take on board Lord Dillon and family for a passage to Malta. . . . After we had taken our passengers aboard we filled, made sail, and stood out of the bay, and on 8th April we safely anchored in Valetta harbour, Malta, where we have been lying ever since, and a very nice place it is. I will give you one of my adventures, which very nearly terminated fatally. One of our marine officers named Annesley asked me to go out riding with him to Citta Vecchia, about eight or ten miles off. We got excellent horses; I got the celebrated chestnut horse. I daresay you have heard of him. We went out to what we call 'Sit-a-week,' and saw all the churches and everything worth seeing; at the top of one church I could see right round the whole island. Well! coming back we were having a race, but mine being the fastest sailing craft I forereached on him, and then, hauling my wind, I was crossing his bows when my craft shied and sent me over to starboard. I hauled down my craft over me, and Annesley, coming up astern, tried to haul his horse up, but instead of that he stumbled over me and my horse, and fell over us, Mr. Annesley at top of all. But his horse did not fall before he had trod on my head and chest. I was senseless for some time, but they soon brought me to, and I found I had only been stunned; but I had a great pain in my chest. I went on board, and the next morning had a dozen leeches on my chest, and now I am all well. . . . I am getting on beautifully in the signals; we go to sea soon, I believe, to cruise with the squadron, when I shall be able to show my zeal. In our passage round from Gibraltar here we encountered a terrible gale of wind, the worst I have seen yet. . . . I have this minute heard that we shall sail on Friday for Palermo, delightful!—and to lie there for a month. The weather is very hot here, and I bathe every day. I swim pretty well now, and I dive beautifully. . . . In a month I shall be rated a midshipman. I shall be very glad of that, and fancy myself quite a man. . . . There are at present only two vacancies in the ship—one for Archie Willan, and the other for Dickens or myself; if Dickens gets it, may I join the *Barham* or some other ship on this station, because if Dickens gets it there is no chance for me in this ship."

On the 2nd July he again writes—

"This is horrible dull work. For the last six weeks we have been cruising just outside Valetta harbour, now and then stretching across to Sicily abreast of Alicata and Girgenti. From there we can see Mount Etna right over the other side of the island. One morning I saw it smoking, which is a great wonder; we expected an eruption, but were disappointed. I have a great quantity of news to tell you, but I cannot think of them. I have had two or three hairbreadth escapes since I wrote to you. Once while 'hove-to' outside the harbour, the *Confiance* steamer was towing a launch full of provisions alongside of us, and the commander sent me with the jolly (boat) to take a hawser to the launch; and as I was lying alongside the ship, the steamer—a very large one—came up with the launch, which caught under our stern and got the steamer's head towards us in the jolly. She squashed the boat, but I and the jolly-boat boys got on board the steamer by means of her bobstays, etc., and were all right. We sail beautifully to what we expected; we beat the *Rodney*, *Asia*, and *Caledonia*, three of the finest ships in the navy. The other day there was a marine hung on board the *Rodney* for murdering his sergeant—it was a horrible sight. The last news were[1] that we are going to cruise off Sardinia. The reason why we are cruising here is because the cholera is raging so bad in Malta. It broke out the other day, and it is very bad indeed now. We are anxiously looking out for Sir R. S——d[2] coming out to relieve this admiral, because when he comes he is sure to take us round his station, and we shall see every place in the Mediterranean. I wish he would come. . . . I am getting on very well indeed with the old commander—I am regular chums with him. I am afraid that there is no vacancy for me in this ship; I must look out for some other—a small craft, if possible. We have had very hot weather here; on one day about a fortnight ago the thermometer was at 90° in the shade. . . . I am quite well. I never was so well or so strong in all my life. I am all bone and muscle; you should see my arm—it is as hard as iron, you cannot pinch it anywhere. In a fortnight we shall have completed two years' time, and have only one year more to serve. When the ship is paid off I must join another directly, or else I shall lose time, which will be a bad tally. We are going to Palmas Bay in Sardinia, a beautiful bay but a bad town. . . . I think I mean to leave the signals; I am getting tired of them. You know, I always like a change."

In this same letter we are reminded of the postal conditions of Malta in those days. The mail packets left England and Malta the 3rd of every month, and arrived at each place on the 17th. It was the beginning of steam mails, and the speed was just about half what it now is.[3]

The execution of the marine on board the *Rodney*—not the only execution at the yardarm that Key was destined to see—comes again as a reminder to us of the great change for the better that time has wrought. Murders or attempted murders have, it may almost be said, passed out of the navy, and the grim and laconic entry in the *Russell's* log might be three hundred years old for all the application it has to the days we live in.

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[1] I did not know before reading these letters that the use of the word "news" in the plural came so near our own time.

[2] Admiral Sir Robert Stopford, G.C.B.

[3] The postage of the letters was 2s. 6d.

"5.20 a.m. Sent boats manned and armed to H.M.S. *Rodney* to attend the execution of a marine for murder. At 5.30 turned the hands up and manned the rigging to witness the punishment. Read the articles of war. 6.30. Boats returned."

After cruising in the way described, provisioning and storing at sea, and running in rarely for water to Malta, the *Russell* had a cruise to Tripoli on a question of supplies to Malta, and later on took an independent cruise, by permission of the admiral, to Palermo and Palmas Bay. Key expresses his delight with Palermo—

> "The most beautiful place I ever saw; it was exquisitely beautiful. I never could have supposed that any place could be half so fine."

Returning to Malta, Key, in the middle of August, is

> "Very glad that we are going to Athens. I shall be able to bring you home good specimens of marble, etc. The *Ariadne*, coal ship, is come out here to go to Alexandria, and our mids. and men are to take her round; therefore, as we are short of midshipmen by that, I have volunteered to keep watch, which pleased the commander very much, as it shows zeal. So I am out of the signals for a short time."

On the 15th of July the news of the death of William IV., and the accession of Her Most Gracious Majesty, reached Malta. On that occasion the ceremonies were that the *Russell* hoisted the admiral's flag at 2 p.m., and fired sixty minute guns to the memory of the late king, and then—*Le Roi est mort. Vive le Roi*—at 3.30 manned yards and fired two royal salutes on the accession of Her Royal Highness Princess Alexandrina Victoria to the throne of England.

On the 17th of August the *Russell* sailed for the Archipelago, and did not return to Malta till the 19th of November—

> "Since I last wrote," says Key, dating from Syra on the 6th of October, "I have seen a good deal. I think then I was at Malta under sailing orders for Athens. We sailed two days after that, and arrived at Athens without any adventure, except that we had a man attacked with cholera, and died two hours

after it. We found the *Portland* at Athens, but I could not see Granville Wood, as we were in quarantine. The Athenians would not give us pratique, as we had a case of cholera, and therefore our captain said he would not stay there any longer, although it would be against his orders to sail. The Greeks said they would give us pratique a fortnight after we left Vourla, so we sailed for Vourla (Smyrna), and after watering there, and seeing the place, we sailed from there to Syra, where we are now (Sept. 22nd). Now to business. Lieut. Lindsay joined us the other day; he came out in the *Wolverine*, 16-gun sloop, and I was talking to him about changing my ship; and he said that the *Wolverine* was the most comfortable ship I could go into; that all the officers, mids., etc., were particularly gentlemanly, and besides that I shall be allowed every now and then to keep officer's watch, which is the best thing I can do to learn seamanship. Again, she is tender to the admiral, therefore I shall see the whole of the Mediterranean, which I should not see in any large ship. She will just serve my time, as she is only a few months in commission (Sept. 25th). We sailed from Paros after we had watered, and arrived at Athens this morning. It was my morning watch this morning before we anchored, and it was blowing rather strong, when all of a sudden it fell a calm. We lowered the topsails directly, as we expected something. It came, a regular hurricane from all quarters at once, lightening, thundering, hailing, and raining all at the same time. I heard two or three of the oldest sailors say that they never knew it blow so hard in their lives. We bore up directly, and ran into Athens."

Key's next letter is dated from Malta on the 29th November; the *Russell* had arrived there on the 19th—

"Here we are, hard and fast in Malta again, and likely to remain here for some time. In the first place, I am rated a midshipman, which is my first promotion in the service. I am now entitled to wear a sword, which I sport on all occasions, I can tell you. Well! since I last wrote to you I have been to dear Queen [of Greece] Amelia's ball. She is the most beautiful creature I ever saw. I only wish she was Queen of England. She shook hands with all of us, and spoke in French to us; I was quite delighted with her, she waltzes beautifully. I went in cocked hat and sword—full dress. . . . I have got charge of the first cutter; a great charge. I can fit her out any way I like. I am on excellent terms with the captain and commander. I have spoken to the commander about the *Inconstant* [he was thinking of trying to join the *Inconstant* instead of the *Wolverine*], but I have not spoken to the captain about it yet, as the commander advised me not to speak to him about it till I heard from papa again. . . . On our passage from Athens to Malta we had three very heavy gales of wind. One off Cerigo, another off Candia, and the other off Malta. We ran into Malta under close-reefed topsails, and looked very beautiful. We picked up our buoy admirably. I heard last night that Graham's Island is risen again; the third cutter is going to sail to-day to look for it.[1] A French steamer that came in the other day said that she saw it. The other day, going to Palermo, we passed the exact spot where it once was. . . . I do not mind how soon I join the *Inconstant*, because, although I am extremely comfortable here, yet, you know, I am considered a youngster, which I should not be in the *Inconstant*. And besides, I am too comfortable here. . . . The Mediterranean agrees with me very well indeed. I am growing very fast indeed. I am 5 ft. 5 in. in height, and stout in proportion. Everyone says that I shall be very tall indeed, and I have excellent health, which is a great thing."[1]

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[1] Graham's Island, between the island of Pantelaria and the coast of Sicily, rose in 1831 as a volcano, but sank again, leaving a shoal now called Graham's Shoal.

Early in January 1838 the *Russell* was ordered to Corfu, there to embark the 11th Regiment for passage to Gibraltar, and, it was supposed, to go direct to England from thence. In the result, however, much to young Key's disgust, as well perhaps to that of a majority of the *Russell's* ship's company, they found themselves back at Valetta on 10th March. But then, after loading up with invalids, seamen, marines, boys, and soldiers, and other passengers, eight live oxen and fodder for them, she sailed for Plymouth on the 27th March at 5 a.m., and, being towed out of harbour by the *Confiance* steamer, anchored in Plymouth Sound on 30th April at 5.30 p.m. It is noticeable that this was a quick passage, during part of which the ship sailed at the greatest speed she had hitherto attained. For a single hour she ran eleven knots, and for thirty-eight hours only, continuously, did she make nine knots or more. After a fortnight's stay at Plymouth the ship returned to Lisbon, and, except for a short cruise for exercise off the port, she lay there until her final orders took her home for the last time. She was paid off at Sheerness, where she fitted out, on the 16th of January 1839.

Here and there there are notes of interest in this last year of Key's first ship, some of which may be picked out of her log and some from the boy's own letters. In the latter can be easily traced developments of his character as we knew it towards the close of his life.

The mere storing of the ship with live oxen when she left Malta for England transports us not only half a century, but many centuries back. The passage from Malta to Plymouth was a "voyage" of portentous character, and required under Sir William Dillon much the same preliminary arrangements as it would have required under Sir

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[1] The prediction as to his height was not verified. He was of moderate height when he grew up, with a slight active figure.

Francis Drake. In February, at Gibraltar, there were, according to the log, "strong gales with heavy storms and rain." At seven o'clock on the morning of the 25th—so says the log—"Let go sheet-anchor under foot; lowered the topmasts close down. 7.30, wind (which had been S.W.) shifted to N.W. in a very heavy squall with rain and hail. The ship drove. Veered to half a cable on the sheet, and brought her up. At 8 saw many vessels run foul of each other, and one brig filled and went over on her broadside, and many on shore. P.M. Lashed the two kedges and stream-anchor together, and bent both stream-cables."

Here we have in perfection the old seamanship, which was less an art than a fashion, less a question of reason than of authority. Authority spoke still for hemp cables, and provided the *Russell* with a sheet and a stream-cable of that character. Apparently she had then but one sheet-anchor, so that, should she have dragged, or parted the cables of those that were down, she had nothing to fall back on but this temporary anchor made up of three small ones.

The astonishing moral tone of a ship, esteemed by young Key to be so very "comfortable" and, according to his account, of such good repute amongst her fellows, still remains indicated by the floggings. It is a well-known feature in men-of-war that the conduct of the ship's company—if the ship is properly managed—shows out better and better as the time goes on. But in the *Russell*, as measured by the floggings, there is no sign of this. A couple of days after leaving Plymouth, when she had been two years and nine months in commission, a whole page of the log is taken up with the record of corporal punishment meted out that day. Eight seamen and one marine received seventeen dozen lashes between them. There is no sign that such a holocaust affected anyone particularly; certainly, young Key was never sufficiently moved by what he saw to mention it in his letters. A week or so later, the periodical arrangements for "rigging the gratings" were proceeded with.

As to the character developing in the environment which I describe from time to time, not only for its historical interest but as a part of the story of the life which I am telling, it was dominated all through this last year of the *Russell's* commission with the prospects of home.

He was disappointed in his hope of visiting his well-loved family from Plymouth in May, but after the ship's return to Lisbon at the latter end of that month there was continued expectation of the last return to England, as in August the usual period of three years' commission would be concluded, and the orders for the ship to be paid off might at any moment arrive. But with the hope of home life once more, which was immediate, there was in the boy's mind the most continuous and anxious consideration for the next ship. To the end of the chapter it may be supposed that the young officer's wishes will centre on service in a "small craft" rather than a large and crowded one, where the law may be firmer, the routine more fixed, and the etiquette more formal; and Key was no exception to the rule, though he varied. One time it is—"the *Modeste*, a beautiful corvette, just commissioned, is the craft for me. I wish you would find out her captain's name and her destination." Then he is back again to an older love, the *Inconstant*, and is regretting that her movements may possibly frustrate his hopes. Next it is—"but what I want to write about in particular, is about joining the *Vernon*. Lord John Churchill is going to commission her; he is said to be the most gentlemanly and altogether the best captain in the service, and the *Vernon* is known to be the finest frigate in the navy." Then he is back again—"I am glad that there is a chance of my joining the *Inconstant*, because she is a very fine ship and will very nearly serve my time, which is a great thing." It seems that some steps must have been taken by his father to place his son in the *Inconstant*, for in June young Key writes that he is very much obliged to his father for trying to get him into the *Inconstant*, and is "exceedingly glad that he has succeeded, as I would rather join her than any ship in the service," and he has "very good accounts of Captain Pring." Then in the middle of July we have: "I do not mind how soon I join the *Inconstant*; therefore I should like Captain Pring to apply for me as soon as he gets a vacancy." The commander of the ship—Luckraft—received his expected promotion on the occasion of Her Majesty's coronation, and left the ship. Key declares he would follow him anywhere, and his loss makes the boy more anxious than ever to change his ship—

> "No news of going home," he says in September. "I am quite tired of Lisbon, and I long to get home. I have been inquiring for a comfortable ship, and I hear that the *Wasp*, in the Mediterranean, is reckoned very comfortable. She is commanded by the Hon. Dudley Pelham. If papa knows anyone that knows him, I should like to join her very much indeed."

But the next letter says—

> "The *Magicienne*, a splendid corvette, just paid off, is going to be commissioned again by the Hon. Captain Keppel, who is liked very much, and bears a good character; I should like to join her very much, if *Russell* is paid off in time."

Early in November the "steam-packet" from Lisbon sprank a leak after sailing, and was obliged to put back. The *Espoir*, 10-gun brig, took the mails, no doubt amid some general remarks that, after all, the sailing vessels, though slow, were sure, and could not be wholly displaced by the revolutionary motive power. But such ideas could not have found a place in young Key's mind, as he writes thus a few days afterwards—

> "I am *much* obliged to you for sending me the book on steam, as I find it interesting, and I am sure it will be very useful. I have read a great deal of it already, and I begin to understand the way the machinery works, of which I had not the slightest idea before."

In the same letter we have an open confession of the fondness for society, especially of the society of women, which was a strong part of Key's character all his life, which formed his manner, and made him such a favourite wherever he was—

> "As we are likely to remain here [at Lisbon] some time," he writes, "if you knew anyone who could introduce me to any family here, I should like it very much, as there are some very nice English families here, and it would be so pleasant to spend the long winter evenings with them. Mr. Smith is very kind to me, but there is no pleasure in spending the evenings without female society, which I daresay you know I am very fond of."

About this time he says—

> "I have had a great deal of intercourse with the French midshipmen lately, and I find that I can talk French better than I expected. The *Donegal* (flag-ship) was taken from them in the last war. They do not seem to like the sight of her."[1]

As to reading, he says—

> "I begin to feel the want of not having been fond of reading in my younger days; although in most arguments I generally get the best of it, but sometimes I find myself involved in one which I am obliged to drop from not knowing sufficiently about it. Perhaps you do not know that a midshipman's berth is an excellent place to pick up information on all subjects."

And then with the light outlook of a young mind speculating amongst realities to come—

> "This war[2] will break out just in time for me to get on; we are all longing for it on board; by all accounts it appears to be inevitable."

The boy's last letter home from the *Russell* is dated the 8th January 1839. They had had very bad and cold weather, and it was trying to all in the ship. But Key had been gratified by a visit from his brother Henry,[3] and was too full of the idea of home for anything to trouble him. Almost his last words from the *Russell* were—

> "I have been wet through ever since Henry left. I have been swamped twice, and had to strike out for it once; but never mind! It's all for the good of the service, and so I won't growl."

In the previous August the promoted Captain Luckraft gave to Key's father a character of the son such as cannot often be truly given of any boy—

> "Having quitted the *Russell*, I take this opportunity of writing to you, which I might have done long since, but I had a particular purpose of deferring to this time. I can only say of your son now, what I might have said months ago. He has been three years with me; during so long a time I have had scarcely occasion

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[1] She had been the *Hoche*, captured in 1798.

[2] Apprehended with Russia.

[3] Henry Cooper Key was the eldest son, and the two brothers were through life devoted to one another. He was rector of Stretton Lugwas for thirty years; a great gardener and a good violinist. He was a Fellow of the Astronomical Society, and possessed what was, twenty years ago, the sixth largest telescope in England. He ground his own mirrors. He died in 1879.

to find fault with him, certainly not for anything of consequence. He is one of the best midshipmen in the *Russell*, a correct, gentlemanly young fellow. I should be delighted to have him with me in any ship, or to recommend him. I left him in good health, and if he keeps in the line which he seems to have laid out for himself he will do well. He is justly a great favourite on board. Unfortunately, that complaint is still sticking to him. I mention this, that when you see him, perhaps professionally you may be able to do something for him. . . . I should certainly think, now that he is growing in strength and manhood, it might be got over."

CHAPTER III

THE *CLEOPATRA*—1839–1841

THE *Cleopatra* was commissioned at Sheerness on the 21st of January 1839. The crew were hulked—that is, were quartered—on board the *Nymphe*, one of the receiving ships moored in the stream, and fitted up for the purpose of housing the crews of such ships as were in the hands of the dockyard and not yet in a condition to be inhabited.

Young Key's hopes and fears came to a conclusion by his appointment to this ship, and he joined her on the 25th, after a stay of only about a week at home. The *Cleopatra* was a 26-gun frigate. She was commissioned by Captain Stephen Lushington, and the other officers who first joined her were—Lieutenants, A. D. Fordyce, A. Grant, F. Denison; first-lieutenant of marines, J. Fraser; master, J. Fowler; surgeon, P. Martyn; purser, J. Halie; and assistant surgeon, W. Henderson. Mr. Warren was the second master, and Mr. John Brown, clerk. Amongst the other officers were Mr. P. L. Ross, mate; and Mr. Lyster, midshipman.

Unfortunately, very few of Key's letters during his service in the *Cleopatra* have been preserved; and while the official records indicate clearly enough what the ship did, where she went, and what was seen and done generally by those in her, we have not much record to guide us as to what the subject of these Memoirs thought of what he saw, and how he mixed in the various scenes into which he was thrown in the course of his service in the ship, extending over two years and a half.

In those days a ship when ordered for commission was generally bare of everything except the lower masts and bowsprit; and it was the business of the crew to place everything on board of her that was required, and to rig her completely—the rigging being really the most tedious work, and requiring the greatest care. The time occupied was long, and the *Cleopatra*, no exception to the general rule, did not put to sea complete until the 24th of March, reaching Spithead on the 27th; and sailing finally from Plymouth Sound on the 10th April for St. John's, New Brunswick. She had embarked 140 men and officers of the 36th Regiment, with a number of women and children, before sailing, reminding us of the capacity of men-of-war to act as transports, and the use that was made of them as such, in contrast with the want of capacity in the ships of the present day and the almost complete cessation of the custom.

But changes in naval practice even since the *Russell's* time find record in the *Cleopatra's* log. The *Excellent*, gunnery ship, puts in another appearance, and the log records the arrival of a gunner's mate and three seamen gunners from that ship—a sort of foundation-stone of the new navy which was growing up as young Key's environment. And then even the log itself shows the signs of change. We no longer find the record of the weather in the body of the daily page, as—"fresh breezes and cloudy," "strong gales and squally," and so on; but the Washington standards are introduced in side columns under the heads of "Force of Wind," indicated by the figures 1–12; and "State of Weather," indicated by letters—as "*b*," indicating blue sky; "*c*," indicating cloudy; "*q*," indicating squally, and so on. The record at once becomes brief and full, precise and short; all in the direction away from the breezy and free vagueness which characterises the entire record of the navy of a former era, and towards the precision of the rigid machinery and close measurement of an iron and steel naval age,—even as the league is giving place to the mile, the cable's length to the fathom and the yard, the minute to the second of geographical measurement, or the half-hour glass to the deck clock;—or, coming to the type of the log itself, from the great black log-board a yard and a half square, where the record went down in chalk, through the smaller and neater log slate, even to the "deck log" of the present day, which is but a duplicate of the fair log-book, and into which the record of every occurrence is written in pencil at the moment it transpires. Yet was the connection with the past kept up, for in the *Cleopatra* they still talked of the "larboard side" and the "larboard tack," etc.

The speed of the frigate in comparison with that of the line-of-battle ship could not have failed to produce its impression on the keen mind of the young officer who noted it. The *Cleopatra* easily got away nine and ten knots before an easterly breeze, of which the force was noted at no more than five, a force which would allow the setting of the lightest sails when the ship was sailing by the wind. And presently, again, it is noted that under like conditions with royals—the lightest and loftiest sails—the ship makes from seven to nine knots, when close hauled.

On the 25th of April, when making for Sable Island, and in lat. 42° 10′ N. and long. 48° 41′ W., they observed some icebergs to the northward, and stood towards them for their examination. There were two great peaks of ice, apparently 150 feet high and half a mile apart, surrounded by a vast sea of detached pieces extending as far as the eye could reach. The beautiful and exhilarating sight could not but have impressed the mind of our young voyager with that sense of embodied majesty, purity, and repose which, whether analysed or not, leaves its mark behind it.

We may remember the occasion of the *Russell's* being struck by lightning, as described in the last chapter. Key was on the 2nd of May brought again into practical contact with the march of scientific knowledge. The ship met with squally weather and thunder and lightning. The sails were gathered up and lowered, and *the lightning conductor was got up*. In those days it was a wire, or small wire-rope, with a pointed end to it, which was hoisted to the highest part of the highest mast, and the end allowed to trail overboard. The later arrangement, which still exists for wooden masts, is a stout strip of copper let into the after side of the mast itself, and having metallic connection with masts above or below it, and, in wooden ships, carried from the lower masts along one of the beams through the ship's side, and down to the copper covering the ship's bottom. In iron or steel ships it is, of course, only necessary to bring the copper conductor into metallic connection with the metal of the ship anywhere. But Key saw all the steps, from terrible danger to perfect safety. He knew in the *Russell* what an appalling thing even an ordinary thunderstorm was to the ship of his time. He saw the danger consciously guarded against by careful action in the *Cleopatra*, and how in later ships all the danger was unconsciously, as it were, guarded against, and no longer existed to trouble him.

The *Cleopatra* having sailed from Plymouth on the 10th of March, anchored at St. John, New Brunswick, on the 4th of May.

On the 9th she proceeded to Halifax, meeting there Key's old friend the *Pique*, with the *Andromache*, *Wanderer*, and, still marking change, the *Medea* steamer, even on the other side of the Atlantic. Key's ship was back and forwards once or twice between the two ports, and on the 3rd of June she met for the first time the commander-in-chief of the station, Vice-Admiral of the White, Sir Thos. Harvey, K.C.B., at Halifax.

Either the men were of a better sort than the *Russell's*, or the methods of discipline were different in the *Cleopatra*, for she seems to have got through the first four months of her commission without a single case of corporal punishment. Yet, as during the months of June and July she passed up to St. John's, Newfoundland, touching at St. Pierre and other anchorages, a sort of epidemic of desertion, such as we have sometimes experienced at other places in later years, seems to have set in, and the men were off singly or in groups, without reason assigned.

Until the 20th of October, when the *Cleopatra* left Halifax for Bermuda, she spent her time about the coasts of New Brunswick and Newfoundland in looking after the fisheries and performing those general duties of guardianship which fall to the lot of a British man-of-war in peace time. The countries were rough and wild, offering great attractions to men wholly devoted to their rods and their guns, but not to young Key, who really was not keen about sport till late in life, and never, if I remember rightly, killed a salmon until after he became First Sea Lord of the Admiralty. He never took to the North American and West India station, missing very much indeed the general society, and especially the society of ladies, which he had longed for in the *Russell*. About all matters of service and duty he was as interested and as keen as it was possible to be, and in his ship he was most happy, a universal favourite, with several warm friendships, and a captain to whom he was sincerely attached, and from whom he received many marks of kindness and interest.

But I suspect that his mind was more full than the few letters which have been preserved show, of the approach of the day—some time in August 1840—when he was to pass his seamanship examination, making him a mate, and qualifying him for promotion to the rank of lieutenant, and of all that might follow that, to him, momentous epoch. There was, I suspect, a certain restlessness, in view of the outlook, which prevented him from settling down to the enjoyments of a naval station which has for a long time been a popular one.

There were some excitements, not only in the counteraction of the deserting escapades of the men, but in searches after unwilling absentees lost in the wild country surrounding the ship. Thus at St. Pierre a man was lost in the fog, and was only recovered after twenty-four hours of wide searching, being brought on board completely exhausted. And then in July, Mr. Martin, the surgeon, got himself lost in the woods at Croe harbour, and the crews of the *Cleopatra* and of the French commodore's ship, the *Blonde*, joined in a search extending through two days and a night, at the end of which they discovered the unfortunate officer, "much fatigued and nearly blind by mosquitoes and flies."

All through September, and up to the middle of October, when she returned to Halifax, the *Cleopatra* was looking after the fisheries on the coasts of Newfoundland, carrying out the provisions of the remnant of the Anglo-French treaty which still continually occupies our ships and gives rise to difficulties. She was in and out of every little bay and harbour round the coast; places of great interest to the sportsman, but not to others.

On the 28th October the ship put to sea for Bermuda in company with the *Winchester*, bearing the flag of the commander-in-chief, Vice-Admiral Sir Thos. Harvey. At Bermuda there was an exchange between Lieutenant Grant of the *Cleopatra* and Lieutenant Page of the *Andromache*, being one of the earliest changes of so many in the ship, that Key, before he left her, may be said to have parted with all his friends. On the 19th of November the *Cleopatra* sailed for Port Royal, Jamaica, towing thither a tank vessel which had been prepared at Bermuda, and which was in charge of a mate, G. H. W. Ross, who had joined from the *Crocodile* in May. At Port Royal was Commodore Douglas, in charge of the port and naval yard; and while there were the *Rover* and *Serpent*, sailing vessels of the old navy, the presence of the steamers *Tartarus* and *Spitfire* was pointing out to Key what was coming, and leading up to a resolution perfectly in keeping with his whole character, which we shall see him put in force four years later, and which had an important bearing on his future career.

A new kind of duty now engaged the officers and crew of the *Cleopatra*—the suppression of the Spanish slave trade to the West Indies under the powers of a treaty. And on the 7th of December his ship sailed to cruise on the south coast of Cuba. She was now in the line of Spanish ships, whether legitimate traders or not, and in the cool manner of the English she made full use of the Spanish harbours as bases for her operations while chasing and boarding every Spaniard who seemed at all suspicious. She was at this work—occasionally meeting and communicating with colleagues engaged on the same business without any result—until, early on the morning of the 3rd of January 1840, when the ship was just south of the east end of Cuba, a suspicious-looking schooner was noticed inshore. Chase was immediately given to her, and, contrary to all experience as yet, she did not grow less suspicious as she was approached. There was hardly any wind, but the schooner was using as much as there was to make straight for the shore. But the *Cleopatra* was gaining, however slowly. By eight o'clock the chase was only five or six miles off. At half-past ten the gig, cutter, and jolly-boat were manned and armed and despatched under the first-lieutenant, Fordyce, to overhaul her. By noon the chase was a mile nearer, and the boats were gaining on her. But she was getting near the shore. Presently those on board the ship saw a boat quit the now undoubted prize. The gig, the fastest and most advanced boat, opened fire. At one o'clock the gig ran alongside the chase and took possession of the Portuguese schooner *Louisa*, with 280 slaves on board, from Basan, bound to St. Jago de Cuba, which had been thus neatly caught about eighty miles short of her nefarious goal.

But as excitements seldom come singly, a second suspicious schooner hove in sight while the boats were thus busy with the first. There was a rush to hoist the barge out and send her after the hoped-for new prize, but she turned out to be a legitimate packet—no doubt, to the general disgust.

Key now entered on a wholly novel experience, for he was sent as second to Mr. Ross, the mate, with ten men and ten days' provisions, to take the prize to Port Royal, 200 miles off. A letter describing the new ideas sure to have been raised by this sudden and close contact with a great body of negro slaves, and the actual conditions of the trade set up by our own Hawkins about 274 years earlier, would have had a special interest; but, though such a letter was written, it is not preserved, and the first letter from Key relating to his *Cleopatra* service was written at the end of February 1840, from Port Royal, nearly a month after the ship's return.

Key, with the rest of the prize-crew, had undergone a period of quarantine; and, writing on the 27th of February, he did not date from the *Cleopatra*, having to report a further change in his affairs. The *Pickle* schooner arrived at Port Royal on the 5th February from a cruise. She was commanded by Lieutenant Holland, a man of excellent reputation in every way—a reputation probably enhanced by general knowledge that he was very well-off. The admiral had given Holland leave to select a mate or midshipman to serve as his second in command. Frank Denison, the junior lieutenant of the *Cleopatra*, was in an extra degree Key's friend, and he was also the friend of Holland, to whom he introduced young Key as the officer he wanted. Holland asked Key if he would come with him. Key was only too delighted, but Captain Lushington's leave must be obtained—

"I spoke to Captain Lushington about it," writes Key, "and he was very kind indeed. He said that he considered that he had charge of me from my friends, and therefore he could not think of my going anywhere that would do me any harm; but he knows Holland, the commander of the *Pickle*, very well, and he was the only man he would let me go with. Holland and Denison both spoke to him about it, and really I was quite flattered (and I am sure you would have been too) at the trouble everyone seemed to take about me. Holland is very anxious to get me, and the captain so very loth to part with me. The captain told me that he thought it would do me good going in the schooner for a short time; and as the *Cleopatra* was going for a cruise till the end of May, and the *Pickle* is going on a cruise also, he agreed to let me go till that time, which is about three months. . . . He gave me a champagne dinner the day I left, and plenty of good advice, and duff.[1] If you knew what an excellent man Holland is, you would not mind my going with him. In the first place, he is a perfect gentleman, and has £2000 a year; then he is a strictly religious and steady man, and a very good officer and sailor; he behaves to me as if I was his son. I am the only mid. on board, therefore I am regular first-lieutenant, and carry on all the duty, which he does not interfere with. You must not think that I left the *Cleopatra* for a short time because I was not comfortable. I told the captain that. Of course I can never be grateful enough to Mr. Denison for the kindness he has shown me for the last year. Although he is a wild fellow himself, he will never let me make a row on shore or anything of that sort, which all mids. do; and Holland (who is a very intimate friend of Denison's) told me that he gave him charge of me with such a solemn face. Holland has introduced me to all the captains and commanders in the harbour, and they asked me to every party. Meanwhile I am hard at work all day, from 5 a.m. to sunset, rigging the schooner, which I am doing all myself,—and pretty hard work it is, I can assure you. We are refitting our rigging, and we shall sail in a fortnight in search of vessels engaged in the 'unlawful traffic of human beings'; and Holland has asked the admiral to allow him to come into Port Royal, on purpose to change me back, at the same time the *Cleopatra* does. . . . When the *Cleopatra* sailed, as I was going to remain behind in the *Pickle*, the captain left me in charge of our prize as prize-master, as she is not condemned. Therefore I am skipper of one schooner and first-lieutenant of another."

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[1] *i.e.* pudding.

Writing again on 9th March, Key says—

"Here we are now, all ready for sea in the schooner, and we sail to-morrow morning at daylight for a three months' cruise. Lots of slavers knocking about now, and some larger than ourselves, so we stand in chance of an action. Would not that be splendid! If we take a prize, however large, I am to go in command of her,—think of that! Last week I had an invitation to go up in the mountains for a few days with Mr. Holland and Captain Robb of the *Satellite*. We went up to a very nice little country house, about ten miles from Port Royal, and it was delightful. The scenery was superb, only it put me too much in mind of dear, darling England. I nearly had an accident there, as sailors always have when they pick themselves up on shore; like schoolboys, we began climbing up trees for fruit, and as I was coming down I took hold of a rotten branch and down I came, and was picked up insensible; but I soon came to, as my head is moderately thick, and I was then all right."

The *Pickle* cruised along the south and south-west coasts of Cuba to the Caymans and the Isle of Pines, chasing ships and frightening some sometimes, as the *Pickle* had a rakish piratical look about her, and the fear of pirates had not then died out. At the Isle of Pines there was varied shooting—wild oxen, pigs, pigeons, and parrots—

"Shooting pigs," says Key, "is excellent fun. Mr. Holland would insist on my using his gun and rifle, and we used to take such long walks together."

In a letter written early in April, Key presses his father and mother not only to allow him to come home, but presses his father to arrange it at the Admiralty. Whether, as a first medallist at the College, Key was then looking forward to what afterwards happened, and was anxious to reap the full advantage that was possible by an early return home, he does not say in his letter, and assigns no cause beyond the mere desire to return home—

"If I am fortunate," he says, "I shall most likely fall in with three captains to pass me in August; and as I really wish to come home directly after I have passed, if papa and yourself have no objection, I wish you would try and get my discharge at the Admiralty sent out to me, as mids. are so scarce nowadays that it is very hard to get one's discharge out on a foreign station. If you apply about the beginning or middle of August it will come out to me just in time. You may be sure . . . that I would not wish to go home if I thought it would do me the slightest harm in the service; but I am certain that it will not, and you may indeed rest assured with that, as I flatter myself I am a bit of a sea lawyer, and know the service pretty well. I have spoken to Captain L—— about it, and will do so again when I join the *Cleopatra*, which will be in the end of next month. I hope . . . you will do this, as I am very very anxious to get home, although I really do not think that there is a midshipman on the station who is, or ought to be, so comfortable as myself. You know, I suppose, that directly I arrive in England I have to pass a second examination for navigation at Portsmouth, which being in this schooner will help me to pass, as well as in seamanship, for I work the reckoning myself, take my own observations, and everything."

He writes also to ask his father to write to Lieutenant Holland to thank him for his kindness. He says: "Holland would like that, I am sure, more than any return it is in my power to make." Further on in the same letter he says—

"Mr. Holland has made me a present of his very handsome gun and rifle; both in one case to fix on the same stock. The rifle is double-barrelled as well as the gun, made by 'Westley Richards,' the best maker in London. He insisted on my accepting them as a *slight* remembrance of the *Pickle*, he said. It is nearly a new gun, used very seldom. You see, . . . everything conspires to make me forget home; the friends I have made out here, and everyone trying to make me comfortable—and yet it only brings home, sweet home! fresher to my memory."

Though the *Pickle* made no captures while Key was on board of her, she was not without the excitements of the chase. One evening,—the 23rd of April, to be accurate,—the ship being at anchor in the track of slave ships in darkness, those on board her became aware of the immediate presence of a schooner running before the wind; not only so, but as she neared there came from her that "racial effluvium" which denoted negroes, and a full cargo of them. A musket was at once fired at her, but she held on her way, and was disappearing into the darkness. The *Pickle* fired her long 6-pounder at her, and there was light enough to see her topsail-yard come down as a consequence, but still the slaver made away. Holland and Key, and ten men all armed, got away after her in the gig, and hoped all things to result. But the slaver had the start of them, and they soon lost her in the darkness. They chased in her direction, however, all night, and only when it was perfectly hopeless did they return weary and disappointed to the *Pickle*—

"If we had come up with her that night," says Key, "what a glorious fight we should have had! Holland would have been sure to have been promoted, and so would I directly I had passed.[1] It would have been a glorious cutting-out expedition,—only our ten men against at least thirty or forty on board the slaver. I can answer for it, they would not have beat us off. How glorious! seeing one's name in the papers for something of that sort! Should not you like it, dearest mama? I was sharpening my sword in the most butcher-like manner all the chase. It was delightful to see how eager our men were to get up with her. . . . The morning after the chase, after I came on board, I just laid my head down in the commander's cabin, and I can assure you I slept for ten hours without waking: fine constitution I have for sleep!"

On the 29th he again writes—

"We have had a very amusing chase after a Spanish schooner. She sailed very fast, but we came up with her and found her to be an innocent merchantman. Sail ho![2] again; I must go up and see what she is. She is only a small fore-and-aft schooner working to windward. Oh! how I long to take a slaver, to have command of her! I expect we shall take one before we get in."

On the 9th of May the *Pickle* fell in with the *Cleopatra* and Holland and Key went on board of her. They foun that poor Captain Lushington had been confined to his be almost ever since they parted, and Key expresses hi sorrow, and recalls the kindnesses done to him by th invalid.

On the 20th May the *Pickle* returned to Port Royal where the *Cleopatra* had already arrived, and Key was ther transferred to his proper ship—

"I left the *Pickle*," he says, "with great credit, I assure you. The me came aft for leave to give me three cheers as I left. Of course it was not allowe Mr. Holland gave me a very excellent certificate. After the usual form writte by the clerk he has written in his own hand:[3] 'Mr. Key has had charge of watch during this period, and I cannot speak too highly of the seaman-like an officer-like manner in which he has performed that, as well as any other duty I have entrusted him with.'"

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[1] Holland's after-career was very different from Key's. He left the *Pickle* i December 1840, and, except that he appears to have been appointed to the *Ospr* for a few months without joining her, never served again. He was made commander in 1846, was placed in the Reserved List in 1851, and died in 1860.

[2] This expression "Sail ho!" I never heard. It had gone out of fashion 1846, and until I read the letter quoted I had been under the impression that never was in the navy, but was the invention of the nautical novelist.

[3] It was one of the changes effected many years later, that the captain shou always express his view of the services of an officer, to whom a certificate was du in his own handwriting.

On arrival at Port Royal, Key received a letter from his father urging him to remain abroad until he was promoted to the rank of lieutenant, and it is remarkable that neither father nor son appear to have had any thought of the more certain, as well as the more distinguished, way in which the young officer was to win his promotion. And while, therefore, Key was generally to be found choosing consciously the course which would lead to advancement and distinction, secondary causes here operated so as to draw him unconsciously towards the goal at which he was aiming. Key replied to the letter, that "if his father really thought it would be for his good, he would stop with pleasure, however much he disliked the station." But for all that, he never ceased to urge his suit, and to plead the disagreeables of the station, until his wishes were gratified.

On the 2nd of June the *Cleopatra* sailed for Bermuda with money for the troops, expecting to be sent to Halifax. And this little incident reminds us of one of the great changes which have taken place in the naval service of late years. At the date which now occupies our thoughts, and for many years later, men-of-war were almost the universal carriers of bullion, whether for Government or private firms; and the small percentage allowed to captains for undertaking the responsibility, generally represented a handsome increase to his ordinary emoluments, and sometimes a sudden and a large fortune. One of the romances of naval life which has now passed away, was the possibility of at any moment receiving such a freight on board as would make the captain comfortable for the rest of his career.

The ship arrived at Bermuda on the 13th of June, but instead of proceeding on to Halifax, as was expected, orders were received directing her to Barbados, to embark some companies of the 76th Regiment and to return to Bermuda and Halifax. Captain Lushington was now so ill that it was necessary to send him to hospital at Bermuda, and when his ship sailed on the 17th he was left behind. The return to the West Indies, though a general disappointment, was otherwise to Key, for at Barbados an uncle of his, Dr. Young, resided during the winter months, and Key was full of hopes—

"I shall have," he writes to his brother, "delightful times if he is there. I believe he lives about eight miles from where we shall anchor; that will be all the better."

The visit to Barbados was, however, so far a disappointment, as Dr. Young had sailed for England about a fortnight before the *Cleopatra's* arrival.

The disappointment did not diminish the young officer's desire to quit the station and return home. All the way down to Barbados he had been speculating to his brother Henry on the chances of his return, and pleading with his mother to use her influence with his father—

"I have great hopes," he says to the former, "of being able to persuade the 'governour' to allow me to go home from Halifax, as I am heartily tired of this station, and I am sure it is no possible use my remaining out. I expect to pass (or try to pass) my examination in seamanship in a month or two, and then I never wish to see this station again. It is a horrid hole! No society; 'no nothing'! . . . I so long to get to England among civilised beings, as I have not spoken to a lady or gentleman, excepting our own officers, since I have been on the station. The 'governour' wishes me to remain away from England till I am promoted. I have no objection to going to sea again on some other station directly I have passed my second examination at Portsmouth; the only thing I do not like is the station I am on, and I wish particularly to get home."

To his mother it is the same story. If his father decides that he should remain, he is willing—

"Though," he says, "I can assure you it required some time before I could make up my mind." Yet, "if you do not think it is for my interest to remain out, I wish you would allow me to go home to pass my second examination. You might send me to sea again immediately. Captain Lushington said: 'A word from your father, and you shall go directly.' . . . I *may* be able to get home soon after your permission, although it is very hard to effect. The *Snake* and *Satellite* are going home; I am a friend of both their captains (Captains Robb and Hay), and they would take me directly. You know, I suppose, that I have to pass a second examination for navigation directly I arrive in England. I do not fear either the seamanship or the navigation,—that is one consolation. You have no idea . . . how many real friends I have made since I have been in the *Cleopatra*,—friends who will be useful to me in after-life.

Mr. Denison is one of my best.[1] . . . I expect to have Captain Parker of the *Winchester* as one of my passing captains; he is reckoned one of the strictest afloat, at least on this station. Captain Lushington has told me to beware of him. . . . We anchored in Barbados last Sunday, the 28th. I immediately went on shore to inquire for Uncle Young, and to my great sorrow I found that he had sailed for England a fortnight since. You may imagine how disappointed I was. Barbados is certainly the nicest island in the West Indies, but I must say, 'bad is the best.'"

In this letter other sides of the growing character display themselves, one of which has been already noted. "I am studying," he writes, "Paley's works now; I find them very interesting. Indeed I do not think I have ever read anything with so much pleasure. Mr. Holland promised to lend me Keith on *Prophecy*, but I came away without it; if you have it, will you send it out with the other things?" A little before, he had said: "I admire the French, and detest and abhor the Yankees; nothing would give me greater pleasure than going to war with them!" He thinks his father does not know "how difficult it is to get made lieutenant nowadays. It requires immense interest and continued application at the Admiralty. I have not built my hopes on getting it for some time."[2]

By this time it has become plain that the subject of my story might have well joined in the words of a song I knew well half a century ago, and have not met since—

> But a charm to me has never appeared
> In the most romantic of places,
> Till a cheerful voice was distinctly heard
> And I looked upon friendly faces.

And a curious instance comes out in two successive letters. Writing on his way from Bermuda south to Barbados, Key says: "Bermuda is about three degrees and a half worse than Sheerness, which place you know well." Writing three weeks later, on the way from Bermuda north to Halifax, we have: "I am rather sorry to leave Bermuda, as it is the only place on the station where I knew anyone." The difference of view had been produced by an introduction to the governor and his family, who were very kind to the boy, and for the time quite reconciled him to his fate. The governor was Colonel, afterwards Sir, William Reid, author of the *Law of Storms*, and the great exponent of the principles which govern not only the action of the winds, but the warnings that may be got of their coming action. But, notwithstanding the mitigation which his dislike to the station had undergone at Bermuda, the dislike is only scotched, not killed. "I really wish I was on some civilised station," he writes on his way to Halifax, "like the Mediterranean, instead of this horrid place. You will think that I am getting quite discontented, but it is enough to make anyone 'growl' being here"—

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[1] Denison, a lieutenant of 1838, was second-lieutenant of the *Cleopatra*. He died in 1844. See Chapters V. and VI.

[2] The names of mates did not appear in the *Navy List* till 1841. There were then 569 on the list, and 142 of them were of more than six years' standing.

"We are afraid," he goes on, "that our captain will leave us after he is married at Newfoundland. I wish he could take me to England with him. *July 20th.*—We are in regular Nova Scotia weather again; I came on deck this morning at four o'clock to keep the morning watch, and I found it awfully cold, and so thick a fog that we could not see a ship's length ahead. In the middle watch, the fog being very thick, a large merchant ship going in the opposite direction to ourselves was seen right ahead, steering directly for us; we immediately put the helm a-port and just escaped both ships being sent to the bottom. We were going eleven knots, and she was going about ten, so the crash would have been awful."

The ship arrived at Halifax on the 26th of July, where was the flagship, the *Winchester*, with the admiral, Sir T. Harvey, on board. Captain Lushington had improved in health since rejoining the ship at Bermuda, and it was arranged that the *Cleopatra* was to accompany the *Winchester* to Quebec, sailing with her about the 20th of August. Key remained restless and dissatisfied, and though pleased with the prospect of lying quiet in harbour for a time, and with the hope of visiting Quebec, could not restrain a fling or two at his surroundings—

"I wish I was in England, off this dull station. Halifax, a place that I have heard praised up above all others, is the dullest place imaginable,—no balls, or parties, or anything! I am going deer-shooting in the woods for one or two days, if I can get leave; fine exercise for my new rifle! You can have no idea what an expensive station this is; you cannot open your mouth under a dollar, and it then takes two to shut it! The three days that I was living with the Governor of Bermuda has done me a great deal of good. I am getting quite *fat* since I was there; fancy me fat! I am very glad that we are going to Quebec."

This sort of restlessness and discontent with his environment, which appears to have possessed the boy throughout his service in the *Cleopatra*, up to this time almost seems to have been the shell of an inward decision which was slowly maturing and had now formed itself—

> "I have," he writes, "come to a decision this afternoon, come to a resolution. I daresay you and papa have heard of the *Excellent*, a ship stationed at Portsmouth to teach officers and men the science of gunnery. There are a great many advantages attached to joining her. Everybody has been advising me to go there, and I really think that I shall get on well if I go there; and it is also a claim for promotion. I have resolved, with your leave [he is writing to his mother] and through papa's means, to get appointed to her. I do not think that you will have any objection; I shall only have to stop there a year at the furthest. If you approve of my resolution, I would be obliged to you to wait till I write you word when I have passed. Then if you would ask papa to try and get me appointed to the *Excellent*. If Uncle Bransby[1] could manage to ask Sir John Barrow,[2] it would easily be done. Then I should be sent home immediately, and get leave. I am sure I should get on in the *Excellent*, as I am getting quite a studious character. If papa has any naval acquaintances, he can ask their opinion of the *Excellent*. You may expect the news of my passing in a short time, but do not be too sanguine. Our worthy skipper and I had a long yarn about it yesterday, which was very satisfactory to me. He is an excellent fellow,—I wish he was well. . . . *August 2nd*.—I am sorry to say our captain is getting rather worse. I was speaking to Mr. Denison about joining the *Excellent*, and he not only approved of it, but strongly advised me to join her, saying that it was the best thing I could do, and also that besides getting my appointment to the *Excellent*, you had better, after having got that, get my discharge from *Cleopatra*. What a horrid station this is! I have not been on shore since I have been in Halifax. I am going to send this by the steamer—the first that has brought the mail to Halifax from England. . . . Our captain is worse, I am sorry to say, therefore he will not be able to go to Quebec, so we remain here at Halifax till the admiral returns."

As it happened, the whole programme, not only as far as the ship was concerned, but as far as Key himself was concerned, was altered. Key was "lent" to the *Winchester*—the flagship—for a time, and the *Cleopatra* was ordered to sea. The *Winchester* proceeded to Quebec, and Key was there in her when, on the 11th September, the *Cleopatra* unexpectedly returned under the following circumstances.

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[1] Bransby Blake Cooper, Mrs. Key's eldest brother. He succeeded his uncle, Sir Astley Cooper, in the house, 2 New Street, Spring Gardens. He was a hospitable, genial man.

[2] The well-known Permanent Secretary to the Admiralty.

I quote from the ship's log: "About 7.30 [on the 22nd September] John Collins, A.B., walked aft on the quarter-deck and thus accosted Lieutenant Page, the commanding officer. 'Are you the commanding officer? I want to strike you!' inflicting at the same time a stroke with his hand on Mr. Page's left cheek. Mr. Page immediately gave directions for the man to be secured and placed in irons. The sergeant of marines, while engaged in executing this order, received a stab in his left side with a knife, inflicted by the prisoner, John Collins." Of this stab he died next day, and the *Cleopatra* at once rejoined the admiral in order that a court-martial might be held on the unhappy man. Key immediately returned to his own ship, and a court-martial condemned the prisoner to be hanged on board the *Cleopatra*. Key was painfully struck by the misery of the whole thing—

> "You must think me," he writes, "a hard-hearted wretch to pass over so slightly the condemnation of the miserable being who is now within a few yards of me as I am writing. It has just struck me what an awful thing it is. I am sorry to say that on board ship we think too little of these things. He is to be executed to-morrow morning at eight o'clock, and I am truly grieved to say his soul is in the same lost state as when he committed the deed; although Mr. Sleight, the chaplain of the flagship, has been constant in his attendance on him, he is as hardened as ever. Is it not horrible to think of? His coffin is actually at this moment being made within his hearing, and nearly within his sight. The poor wretch is staring about him in a horrid vacant manner. It is an awful lesson to the seamen in the squadron. I will not close this till after the execution. *Monday morning.*—It is all over: an hour ago the poor wretch was sent to his last account. He remained hardened to the last. I was close to him at the awful moment; the only words he said were, 'Do not run me quick, but walk me up slowly.' He walked as firm to the forecastle as he ever walked in his life. He struggled for two minutes, and then all was over. His body is lowered down now, having been up for an hour. And now, to hear how the sailors are talking and laughing, you would not think that anything had happened."

This terrible scene was a sort of foil to the joy the young officer was otherwise experiencing, for he had passed his examination for lieutenant on the 20th of August, and his parents had approved of his application to join the *Excellent*, and were using their influence at home to further his wishes, and he was keenly looking forward to his discharge to some homeward-bound man-of-war. Yet he was a long time from this climax to his happiness. The *Cleopatra*, with the other ships of the squadron, ran down the St. Lawrence on the 29th and 30th of September. On the 6th of October the *Cleopatra* anchored at St. John's, Newfoundland, where all this time Captain Lushington was lying sick. On the 8th he was invalided—that is, finally discharged for a passage to England, as too ill to continue in command of his ship. Then, on the 11th, the *Cleopatra* again put to sea for Bermuda, where, on the appearance of the admiral a few days afterwards, Captain Alexander Milne[1] was transferred from the command of the *Crocodile* to that of the *Cleopatra*. The ship then went the round of the West Indies, and no doubt drew from the young mate fresh expressions of disgust at the surroundings and at the postponement of his return home. There was not much of interest for the remainder of the year, but there were aggravations to one of Key's affectionate and social turn. His captain had gone, and now his best friend amongst the lieutenants—Denison—also fell sick, and was obliged to be sent home. In the midshipman's mess there were several changes, so that the ship began to be strange though so familiar. The men themselves seemed to feel the effect of the several changes, and got, as it is called, "out of hand." On the 14th January 1841, while at sea, they found that some mischief-makers amongst the crew had unrove the fore tack, jib-sheet, and downhaul, and cut the jib-halyards, and thrown the coil overboard. There was a rough-and-ready way of dealing with this sort of thing in those days, which the ship's log discloses without directing attention to the comic aspect of the proceeding. "Stopped the starboard watches' grog," says the log, "except the petty officers', for the more effective means of finding the person who cut and unrove the gear as noted." The official record says nothing of whether the means used were effective, but some successful slave-chasing broke in on the monotony of the time. On the 27th of January the ship put to sea from St. Thomas, and was immediately in chase of a vessel which proved to be a Spanish slaver with 288 negroes on board. Mr. Gordon, the senior mate, was sent away in charge of the prize, and this gave Key what is always looked on as a substantial rise in rank and position. He now began to take charge at sea as officer of the watch; to be, in fact, the lieutenant, the placeholder or deputy of the captain when the latter was not on deck. It is often a rather nervous time for a young officer. All eyes are turned on him, to see how he will do it; but, worst of all, he has to get used to the sound of his own voice, and this has generally a very strange and unexpected *timbre* to him. Perhaps one of the most remarkable features of the change from sail to steam is, that the officer of the watch need now have no voice at all. Key, as a mate in the old days, stood on the weather gangway, and was bound to make his voice heard all over the deck, and all over the rigging, from the flying jib-boom end, over the royal-mast heads, and down to the taffrail. Now the officer of the watch rests on a bridge near the fore end of the ship and whispers confidentially all he has to say down the nearest voice-tube, or, mayhap, speaks not at all, but turns a handle or two. The glory of it is gone for ever, unless glory is to come from considering how will, that is almost disembodied, has come to rule.

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[1] The late Admiral of the Fleet, Sir Alexander Milne, Bart., G.C.B.

After the West Indian winter the *Cleopatra* came north again, but with yet a new captain, Christopher Wyvil,—Milne going back to his old ship, the *Crocodile*,—and she went over the old round in protecting the Newfoundland fisheries, and with much the same old trouble of desertion epidemic amongst the men. But in July, Key's time was come. He was discharged for passage to England to join the *Excellent*, now "his proper ship," on the 23rd of July 1841, at St. John, New Brunswick. He must have been in high glee, for there were few left of the original *Cleopatras*—his friends—behind him in the ship, to furnish matter for regret. Of those who quitted England with him, the captain, all the lieutenants, the master, and nearly all in the midshipmen's berth had disappeared from the ship, from various causes, before Key left her; and it is a striking evidence of the sieve-like character of the naval life, that when Sir Cooper Key died, he was either the last, or the last but one, left of all the original *Cleopatras*. His old ship had yet another cruise without event in the West Indies, and then she took her departure homewards from Barbados on the 9th of March 1842, anchoring at Spithead on the 7th of April, and being paid off at Chatham on the 20th.

CHAPTER IV

EXCELLENT AND COLLEGE—1841–1843

I WAS greatly at a loss for knowledge of Key's life during the period of his service in the *Excellent* and at the College, where, true to his instincts, he had placed himself as in the advanced-guard of forward change, and where the distinction which had attended him without a break all through his career was to become more marked than ever. There is no College log where all that is striking finds record, as we have already seen in the ships where he served; and there would be fewer indications of character in the short letters possible to preserve, while for that very reason the letters would fail to survive. But a College and a lifelong friend of Key's, Captain Montagu Burrows, *Chichele* Professor of Modern History at Oxford, whom the navy has proudly seen able to distinguish himself at the University of Oxford, even late in life as he took up his place there, has offered me a tribute to the memory of his old and distinguished friend, and has recorded his recollections of the time which was to both of them so happy and so stirring. I make no apologies for quoting him in full, being very well aware that he was much more worthy, as well as much more competent, to fulfil the office which has fallen to me. Thus he writes:—

"My knowledge of Cooper Key (or 'Copper Key,' as he was familiarly called amongst his friends at the Royal Naval College, Portsmouth) only dates from our meeting at that institution in 1842. We had indeed been trained at the same College as boys, but he was my junior by a year, having entered in August 1833; and, according to the custom of the place, the separation by an interval which then seemed long—and indeed it was half the whole course—prevented our knowing much more of each other than the names. He was probably too low down on the list to take any part in the momentous reassertion of the authority of the twelve seniors over the rest of the boys, wholesomely exercised from time immemorial; but for something like a year set at naught by a knot of stalwart youths more distinguished for bodily than for mental prowess, who delighted in calling themselves 'the twelve brigands.' He must have been, however, most assuredly on the side of order, and swelled the tide of juvenile opinion which prevented the successful counter-revolution from being attended with any more sanguinary circumstances than the public 'cobbing' of the arch-offender for kicking with extreme violence a little boy named Kingsley—the brother, I believe, of the celebrated author. Nor were our first experiences at sea gained in the same ships, nor on the same stations; so, as I say, it was not till January 1842 that we began a close friendship which lasted for life.

"The circumstances of the intimacy which now took place between us were not at first sight favourable to the idea of friendship. We were rival competitors for the lieutenant's Commission, which in those days was given, twice in the year, to the mate (the sub-lieutenant of to-day) who passed the best examination in mathematics at the end of his year of study. Now, if there was one thing more terrible than another to young men who were anxious to 'get on' in the service, it was the prospect of being condemned to linger in the lower ranks as an 'old mate.' It simply meant ruin. Out of the numerous 'old mates' whom I remember, only a very small percentage escaped from gross deterioration under this shocking mismanagement of the younger officers by the Admiralty of the day. It could only be excused by the fact that it was the inheritance of an evil system produced by the superabundance of officers called out for the service of the great war; but it should be stated that it was beginning to receive attention and remedy at the time of which I speak.

"It may be imagined, then, what an avenue to a comparative paradise opened out before the eyes of the young mates who had any talent for mathematics and no objection to hard work. In days not long before this time, the gold medal won by the boy who passed the best examination at the Naval College carried with it a lieutenant's Commission when he arrived at the age of nineteen and had passed for seamanship. This was thought not to answer well, and indeed it was too great a prize to be won at the age of fourteen or fifteen. It had been a feature in the effort to meet the requirements of the day, made by the more cultivated portion of the governing body of the navy, themselves for the most part 'collegians.' But there had always been a strong opposition to this party amongst the officers who had not passed through the Naval College, and who looked upon all scientific attainments not so much as waste time, but as injurious to the acquisition of seamanship and the details of routine. They were right in attacking this particular plan for encouraging scientific tastes; they were wrong in forcing the Admiralty to put an end to the Naval College altogether. That did not, however, last long. It was seen that some sort of education for the navy was necessary, and the admirable plan was adopted, first of assigning the empty apartments and halls of the time-honoured College for boys, to the mates on full-pay and officers of the higher ranks on half-pay; and soon afterwards of turning the *Britannia* into a college for boys, where they might receive that suitable mixture of school and ship training which the old College had failed to supply. It thus took about half a century to compose the differences which had existed from the time of Nelson between the two classes of officers above mentioned.

"The development of the Naval College at Greenwich has been a still later form of the movement for the higher education of officers who have attained to manhood. It mainly arose out of the replacement of wooden sailing ships by iron-built steamers, and was first organised as a place of education by the subject of this Memoir.

"The abolition of the gold medal as a great life-prize had been very unpopular amongst the young officers of a scientific turn, even though the memory of the past had been to some degree effaced by changing the metal of the coveted distinction. There had always been a gold and a silver medal. The gold had been changed, when it ceased to carry a Commission, to silver; but there was still in our time a first and second medal, both of silver, given precisely as before to the two highest boys in the College each half-year. It was natural that those who had carried off the 'first medal' should find themselves better equipped than their contemporaries for the new struggle in which they eagerly rushed to engage as young men of twenty to twenty-three. As boys they had marched far ahead of their companions, and become, for the last part of their course, Dr. Inman's peculiar charge. To them the veteran senior wrangler delighted to impart such treasures of his knowledge as they could digest, and for which the common routine of study did not provide. Under his personal training they learnt not only the art of taking accurate observations of the heavenly bodies and other objects, but the principles of the necessary calculations, and indeed many things besides. Even though this might not have been followed up, the contact with a superior mind like his left its mark; and if being thus singled out was a little spoiling, the inevitable hardships of the career which immediately followed it on going to sea brought everything to a common level. But in many cases it *had* been followed up, and the medallists sniffed the approaching contest with a keenness of scent for which their sea experience might well account. Before Key and I became competitors, the 'first medallist' of the old College had never been beaten in the race which he ran for in the new. But ours was a peculiar case. We had both obtained the 'first medal,' and a contest between two who had been equally successful as boys had never yet taken place, nor did it again occur.

"It has been necessary to say as much as this, in order to bring out Key's special characteristics. He started with a serious disadvantage. He brought with him no reputation for industry, nor had he pursued, as far as I can remember, any special course of preparation for the arduous year of work which awaited him.[1]

"He had, again from circumstances, much less time to spend during the short leave from the *Excellent* which preceded the College year, than I had. He was known to be clever, and he was a most popular man, but he did not rise above the level of his contemporaries—probably was ignorant of the great powers which were latent within that easy-going and pleasant exterior. Without being a handsome man, I may here say that Key was a very 'nice-looking' fellow, and had a capital figure. I have certainly never met anyone to compare with him for powers of fascination. Some men are adored by women; others are much more the favourites of their own sex. With Key everyone fell in love, men and women alike. There was in his composition a remarkable mixture of gentleness and manliness, readiness of expression and fun, quickness and modesty, good breeding and common-sense, which took people by storm, and which was the natural fruit of an excellent home education, and of high principle maintained all through the ungenial atmosphere of the midshipmen's berth.

"His father and mother were remarkable people, in every sense of the word; to them must be given the chief credit of this gracious manhood. From them he derived his peculiar talent, which, exhibited in the most eminent form through both lines of parentage in the medical profession, took in him the direction of an astonishing rapidity and correctness of insight into mathematical problems, for which he was unrivalled. What others could only attain by a circuitous route, following methods already found useful in similar cases, Key could pierce almost at once by some unknown process, which used to remind us of the familiar stories about the famous 'calculating boy' of those days or a little earlier. It was this special talent which made up for all previous loss of time. He did indeed set to work in earnest as soon as he joined the College, and he was most fortunate in securing a Cambridge tutor of eminence during the summer vacation, thus receiving what our professor at the College—himself, like Dr. Inman, a senior wrangler—did not supply,—the explanations of principle without which the higher mathematics are not much more valuable than the various virtues without charity.

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[1] We have seen how true this statement is, and how remarkable it may be thought that all through his previous service he seems not to have contemplated contending for the great prize he was to win.

"Professor Main was a good and popular man, but did not possess the art of teaching. How could the whole course of mechanics, the differential and integral calculus, hydrostatics, hydrodynamics, and optics be mastered in a year without assistance of a peculiarly close and suitable kind? The standard was that of Cambridge. The first class represented the wrangler's degree, the second that of the senior optime. If it were not that the professor himself established the course, I should be inclined to think that his instinct taught him to despair of arriving at any good result in so short a time, and thus that he thought it best to leave us pretty much to ourselves. All this, no doubt, is managed much better nowadays at Greenwich.

"I am by no means prepared to say that there were not more than two men who profited sufficiently by this cram-course to make their studies practically useful for nautical purposes, but the only men of whom this was commonly said in those days was the subject of this Memoir and the late Sir Alfred Ryder, admiral of the fleet. Many others, of course, benefited by the industrious habits and power of thinking to which the course contributed, but a better one might easily have been adopted for this purpose. It suited Key, however, wonderfully well. He added to his knowledge when he went to sea, and applied it excellently in the re-launching of the stranded *Gorgon* in the harbour of Monte Video, and even more conspicuously in the account of that successful operation which he published. It stood him in good stead when he was called upon to apply his talents to the organisation of the navy and construction of ships, as well as to the problems connected with gunnery which the new organisation brought to the front. An average man, with the average training, could not have performed that work. His rival by no means possessed the peculiar gifts required, and it was not wonderful that Key carried off the coveted Commission. At the first examination which tested their respective powers, at the end of six months' work, that rival was the favourite, and justified the opinion formed, from the advantage he possessed in a better start, by coming out well ahead of Key; but there were some who had discerned Key's superior talents, and at the end of the year, thanks chiefly to his quickness in working hard problems—the only true test of mathematical eminence—he came out in the first place of the first class.

"How did we escape the dangers of unwholesome rivalry which appeared to be inevitable, and preserve the relations of Pylades and Orestes? I have no hesitation in asserting that it was because we were tied together by the bonds of Christian unity. Perhaps, if I had not attained an age which enables a man to say outright what he means, I should have hesitated to say so; for it might be misunderstood as a claim to some sort of superiority which we did not possess. I think Key *was* a little misunderstood. His high spirits and gaiety, his fondness of female society, and his passion for athletic sports, in which he excelled, obscured the fact that he was essentially a religious man. That foundation being laid, it was happy for us both that we were pursuing our studies just at the very time when Archdeacon Samuel Wilberforce was creating all round him, from his Alverstoke centre, that atmosphere of religious influence which has gone on widening over the whole neighbourhood ever since. He and his curates—Trench, afterwards archbishop, and, I may surely add, my brother Henry, his other curate, afterwards canon of Rochester—formed an inner circle of religious and intellectual eminence into which it was our privilege to be taken up. At my father's house at Anglesey Key was at home, and on the never-to-be-forgotten Sundays we heard together what we could never forget. One model woman, Mrs. Richardson, the first wife of Dr. (afterwards Sir) John Richardson, the famous

Arctic traveller, must also be mentioned as having deliberately set herself, in spite of the claims of a large family and many friends, to raise our professional ambition to the higher level of religious duty. Lord Beaconsfield, in *Lothair*, most truly says that it is worth all other social advantages in the world to have known in early life one noble woman. Key and I knew more than one; but no young men ever had a common friend who better understood how to get at their hearts, and elevate their whole nature, than we had in Mrs. Richardson, of Haslar Hospital. Her letters have remained amongst my treasures ever since those days, and for their elegance and fine spirit might well be published if they were not too sacred. One sentence bearing on the present subject may, however, find a place:—

"'I have always looked upon the struggle between you and Key as involving far higher things than the lieutenancy, and my wishes are so much confused by knowing you both, that I am very glad no word from me can influence the final decision.'

"It was in this spirit that we received the Holy Communion together, just before the examination began. It would not be true to say that we were thus enabled to be perfectly indifferent as to which of us should succeed, but it is quite true that we absolutely lost all sense of variance or ill-feeling, every spark of "envy, hatred, malice, and uncharitableness," and were both prepared to welcome the success of either, though at the expense of the loser. And this remained. Ours, no doubt, was not the only case of the kind, but the circumstances are characteristic of Key's early life, and will explain much that came afterwards.

"The reader will excuse the few words which have been necessarily bestowed on Key's rival, since those alone could bring out the biography of the man himself; but he will not be troubled with any more. Both went off to sea and took different lines, the result, exhibited in different ways, of the common life they had led at Portsmouth and Alverstoke."

I have said that the remanents of Key's life at College under his own hand are scanty. There are just a few lines which should be quoted as illustrative of the account Captain Burrows has given of him at this time. He writes to his mother, under date 25th September 1842—

"If you have Keith's *Signs of the Times* would you be kind enough to lend and send it to me, and also his *Evidences of Prophecy*, which I think you have in town. I have kept my resolution bravely, not having been out to a single evening-party except to Lady Hastings' one evening she asked me to go in. Burrows and I are both in good health, and working very hard, and getting on equally well.

"We have such a nice set of captains and commanders here now. There is one commander, Captain Caffin,[1] a great friend of mine; he was an old friend of Holland's. The captain is very kind to me; I like him more and more every day. You can have no idea with what pleasure I shall look back on the year I have spent here. I am certain that I shall always consider it as the best employed year in my whole life.

Again on 9th October—

"I read your last delightful letter with a great deal of pleasure; it enlightened me on other points beside the one in question. My reason for asking the question was, that I had Molyneux on *Regeneration of Baptism* put into my hands; and as he is, I believe, a very low churchman, I did not like to read it before asking your opinion on the subject first, for fear of being influenced in any way by him, but now I can read it with safety.

"Now I am going to ask you another question on a subject which I am afraid is difficult to explain. What is meant by Christ's descending into hell? You need not explain it to me, but refer me to passages in Scripture where I can find it out myself. What a delightful book the *Evidences of Prophecy* is! you may think I am a long time reading it, but I am only half through it now. The only time I can possibly spare is Monday afternoon, and after evening service on Sunday. Our quarterly examination commences to-morrow, and lasts till Thursday. I hope I shall beat Burrows."

The next scrap of a note is without date beyond the day of the week (Tuesday), but it relates most probably to the examination just referred to—

"I am first, I am happy to say, by several numbers. I only trust I shall be so next time, but I do not think about it. . . . Burrows has just been in my room while I am writing, and asked me what I was about. I said I was writing to you, telling you that I was first; so he says I am to give you his love at the same time. And really, although he only said it in joke, yet I am sure he loves you for my sake. We often talk about you. It is so delightful to think that we are such good friends."

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[1] The late Admiral Sir James C. Caffin, K.C.B.

CHAPTER V

THE *CURAÇOA*—1843–1844

THE *Curaçoa* was a ship with a poop, a sixth rate, carrying 24 guns and 240 men. She was commissioned at Chatham on the 1st March 1843 by Captain Sir Thomas Pasley, Bart.,[1] and on the 6th the newly promoted lieutenant, Key, joined her as junior and gunnery lieutenant, and there he found, to his delight, his old friend in the *Cleopatra*, Frank Denison, installed as first-lieutenant, and next day Mr. Carmichael joined as second-lieutenant. Other officers soon made their appearance, and the fitting out of the ship went on at a rate which was, for those days, brisk. A piece of scientific improvement which does not appear to have had its day, I find noted in the log. Some of the sails were dipped in " Burnett's solution." Sir William Burnett was medical director-general of the navy, and his name was long preserved by means of a disinfectant, largely used in the navy, which bore it; but what the object of the present solution was I am unable to say. It may have been a non-inflammable compound or a preservative. No doubt it was duly watched and noted by the junior lieutenant.

On the 27th of April the ship was towed down to Gillingham Reach by the *Monkey* tug—a very early exponent of the new system of propulsion, and there she was employed for the two succeeding days, as the log has it, in

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[1] Sir Thomas Pasley was afterwards captain of H.M.S. *Royal Albert* during the Crimean War; then successively captain-superintendent of Pembroke Dockyard, rear-admiral superintendent of Devonport Dockyard, and admiral commander-in-chief at Portsmouth. He retired from the navy in 1870, and died at Moorhill, Hants, in 1884.

"swinging ship to find local attraction." This, again, was one of the innovations or advances with which Key no doubt much concerned himself. The existence of what is now called "local deviation" in the compass was a comparatively recent discovery. It was always slight in wooden ships, but in the early iron ships was found to be so great that it used to be seriously discussed whether the fact alone would not hinder the employment of such material in shipbuilding.

It seems strange to us now to recall the indifference with which errors of the compass were treated only so short a time ago. Sir Thomas Pasley was more alive to the point than some of his contemporaries; and though he speaks in his journal of Captain Johnstone, who was then devoting himself to this branch of naval science, somewhat slightingly as "the compass man," he yet used his influence to obtain that without which no ship would now be thought fit to go to sea, and was supplied with "a standard compass as a favour."

Every ship in those days, if not in earlier ones, was pursued by experimentalists, and anchors of experimental construction were supplied to the *Curaçoa* when she had completed the examination of her compass deviation. She was given a "Roger's" anchor on the one bow and a "Porter's" on the other. Roger's was but a modified form of the ancient anchor still in use, with an iron instead of a wooden stock. Porter's anchor was a curious novelty, with its crown and flukes in one piece, rather in the form of a boomerang, and pivoted through the centre on which it worked. Falling into the hands of a Mr. Trotman, who made a slight modification in it, it became well known on paper for a great many years, owing to the persistent advocacy it received at the hands of the modifier, notwithstanding which it fell out of use.

The progress seawards was in those days somewhat deliberate. The *Curaçoa* was towed down to Sheerness by H.M.S. *Tartarus* on the 1st of May, and she was inspected by Vice-Admiral Sir Edward Brace next day. On the 3rd she was towed as far as Margate by the

Tartarus and *African*, when a thick fog compelled an anchorage.

Sir Thomas Pasley had been twelve years on shore when he assumed command of the *Curaçoa*. The days when the necessity for large reserves of officers was not admitted had not yet arrived. There was but a slight indication of "retirement schemes," and officers accepted early promotion and long rests on shore afterwards as inherent in the naval system. The manning of the navy, too, still remained as it had been. The *Curaçoa* was sixty men short as she lay at anchor off Margate, and with fourteen men on the sick-list could have made no approach to that efficiency which is now demanded of a man-of-war before she leaves her port. Even while at Portsmouth, Sir Thomas records his attempts to man his ship, and regrets that owing to the rain he was only able to pick up two men.

The coming change from sail to steam finds a regretful record in the captain's journal. The *Curaçoa* passed the *Cyclops*, which was a sister steamer to the *Gorgon*, hereafter to be spoken of. Captain Pasley notes her, and records his sorrow that he did not take command of her instead of the *Curaçoa*, she being so independent, while the *Curaçoa* was in tow.

On the 4th of May the *Curaçoa* managed to get as far as the Downs by the use of her own sails, and on the 5th she finally put to sea, arriving on the afternoon of the 6th at Spithead. By the 10th she had got as far as Plymouth Sound, and was detained there, as the log says, "fitting new chain cable compressors, the old ones being useless," which gives us a hint that chain cables were still somewhat on their trial.

She was, however, ready for sea on the 22nd, and the ponderous and rather inconsequent methods of the old time are illustrated by the log noticing that on that day "Rear-Admiral Sir S. Pyne came with pay clerks to pay two months' wages." The two objects of remark being, that it took a rear-admiral and staff of civil clerks to do that which is now done monthly by the paymaster of the ship without excessive note; and that care was taken in these bygone days not to let the men get their money until it was certain they could not spend it, unless they had run into debt beforehand. In this case the *Curaçoa* sailed next day.

The passage from Plymouth to Rio Janeiro occupied fifty-four days, being broken by short stays of a day or two at Madeira, and at Santa Cruz in Teneriffe. The apparently dull recitals in the log of the changes of wind and weather were to the voyagers the elements of that romance of the sea which everyone felt in the days of sails, but which disappeared, possibly for ever, when steam became a commonplace. Apart from these changes, there was not much out of the ordinary track to influence the character whose history we are tracing.

The gloominess of the first day at sea, when the absence from all those each one holds dear is a fresh wound, leaves a record in Key's journal—

> "How wretchedly dull everyone seems! The chaplain is the only happy-looking man in the mess. The way they are all employed is rather amusing. Denison is on deck, looking very sulky, growling at everybody; I would not like to tread on his toes for something. The master, having seen the ship clear of the land, is just come below, and immediately sits down, pulls out three old letters in a lady's hand, and reads them. The marine officer, who is subject to alternate fits of sentiment and sea-sickness, is leaning with his head on his hand and the Army Evolutions before him upside down."

But the young lieutenant, full of an eager spirit, though sailor-like he was not now unmindful of the girl he had left behind him, and full of memories of his much-loved home circle, was the last person in the world to suffer his energies to be hampered by soft remembrances. He plunged at once into his regular "three watches," adding thereto the gunnery duties for which he was appointed to the ship. "All my spare time," he says, "is taken up with drilling. But one is never so happy as when always employed."

On the night of 27th May, Key's innate readiness and seamanship came in to save a serious collision with probable loss of life. The ship was close hauled on the starboard tack, and Key and the captain, Sir Thomas Pasley, were walking the quarter-deck together, Key being officer of the watch, at half-past nine at night, when the lookout reported a sail ahead. In those days no anti-collision lights were carried, and there was not, any more than there is now, any settled teaching as to what is safe and what is dangerous in approaching another ship at night whose condition is not made out. So Sir Thomas gave what was a usual but yet dangerous order in calling to the helmsman, "Luff!—keep a close luff!" Key, not easy in his mind as to the result, rushed forward to the forecastle, and there saw that they were running straight into a ship which was close under their bows. Key was quick with the reversing order: "Hard a-starboard!—let go the peak halyards!" and had the satisfaction of finding the ship pay off, so that the *Curaçoa's* flying boom just cleared the stranger.

A couple of days later, Key being below, heard the always startling cry of "A man overboard!" and, rushing on deck, he found Denison, the first-lieutenant, in the act of jumping after the man; but the latter caught a rope, and Key and Denison hauled him in.

The old-world character of times so little distant in point of years comes strangely out of the pages of Key's journal on this and the next day—

> "A man was found drunk this morning; I suppose he will be flogged to-morrow.
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> "The captain flogged that man this morning; gave him three dozen, and wound up with a short appropriate speech. We were all much pleased with the captain's behaviour, as the first flogging is generally taken as a criterion of his future conduct towards the ship's company, in the way of supporting his officers."

None of the facts, and little of the sentiment, remain at the present day, where the finding of a man drunk at sea is almost impossible, and no trial of the public character of the captain, and his capacity of self-control, exists under the rule of law which prescribes everything, and hides punishment from sight.

Key's view of the blessing of work always seems to have kept his spirits at high level—

> "This has been a beautiful day," he writes on 31st of May. "If we had not a foul wind I should enjoy it above all things. At 6 p.m. we turn the hands up to dance and skylark, and the men on one side are dancing to

the bugle and fiddle; on the other, they are playing at two or three different games, all looking so happy! On the quarter-deck the youngsters are skylarking and racing up aloft."

On 6th June the ship anchored at Funchal, Madeira, and Key, setting eyes for the first time on this soft and languorous paradise, is in all ways enraptured with it. He is particularly struck by the wealth and variety of the fruits and flowers—

> "Madeira is the only place in the world where you see such a variety of fruits and flowers. I assure you there are fuchsia and geranium *hedges*; and then, you see the cherries, peaches, gooseberries, currants, etc., growing alongside of the mango, shaddock, pine-apple, and all the West Indian fruits."

What used to strike me more and more on every visit to Madeira was its soft stillness, so that the clattering of a horse's hoofs on the pavement of the town was quite an alarming sound. Key had his fill of the Madeira horses, charging equally up or down hill, with their attendants holding on to their tails. Nor does he forget to remark that, in charging down hill, the approved plan is to fix your cigar tight in your mouth and hope for the best with a loose rein.

The *Curaçoa* was at Santa Cruz on the 11th, and made an effort to weigh the anchor on the 12th, with the intention of putting to sea, but there was no ordinary power which could move it. All blocks and tackles applied gave way under the strain, and at half-past nine at night the task was given up in despair. They guessed that they had accidentally hooked an anchor and cable lost there by the *Winchester* nine years earlier, and which it had been the thankless task of many men-of-war subsequently to search for without result. All the next day they were at it with improved and strengthened purchases, and by the afternoon had secured not only the lost *Winchester's* anchor of three tons weight, with 150 fathoms of cable attached to it, but another smaller anchor and cable, the whole weight being over eight tons.

The contrast in our views of what constitutes swiftness of movement at sea is brought out by a note of the *Curaçoa's* passage to Rio Janeiro. Sailing from Santa Cruz on 14th June, she arrived at Rio on 16th July. She never on any occasion ran for an hour at a greater speed than 9.6 knots, and her greatest run in one day was 211 miles, her average being less than 122 miles per day. And yet the *Curaçoa* was a good sailer, and easily passed merchant ships. But her officers thought she was "rattling away" when she attained the speed of eight knots.

The *Curaçoa* was now on her station—the south-east coast of America, the interest of which centred at this time between possible captures of slavers to the northward and possible wars with revolutionary parties in the river Plate. But Sir Thomas Pasley being required to carry on the senior officer's duties at Rio, the *Curaçoa* lay there for two months and a half, which were comparatively uneventful.

Key had, however, one opportunity of showing the stuff he was made of, which he thus describes—

> "The only other affair of any interest that has happened since is a very narrow escape a boat's crew and myself had the day before yesterday. There are two American frigates and a corvette here—the *Brandywine*, *Columbia*, and *St. Louis*. Between the anchorage where we are and the town, there is what they call a bar, running across. It is a sandbank, on which there is a tremendous surf when there is any swell in the harbour after a gale of wind. For the last week there has been a *very* heavy surf running on the bar, the heaviest the Brazilians have ever seen since 1833. There is one place where it can be crossed. Two days ago I was going on shore in one of the cutters, with the chaplain and one or two of the midshipmen in the sternsheets, I being in command of the boat, of course. I steered straight for the passage (even there some very heavy surfs broke occasionally), but as we were on the bar I saw a tremendous roller coming up astern. I sang out, 'Give way for your lives, men!' when the surf struck us on the stern, broke over us, unshipped the oars, and hove one man overboard, clean out of the boat. The surf carried us on about twenty fathoms, and left us up to our waists in water, and the unfortunate man still struggling in the centre of the surf. We had lost four oars, but we got the boat round to pull into the middle of the surf again for the man, and succeeded in picking him up. In the meantime two American frigates' boats and one shore boat were pulling past us towards the surf. In half a minute they were on the bar, and a heavy roller was fast coming up with them. Fancy my horror at seeing all three boats capsized and turned bottom up at the same time, there being twenty human beings struggling for their lives in the middle of a most tremendous surf, and apparently no chance of a boat being able to save them. I of course pulled right in towards them, and succeeded in picking up all but five. Only one of those five was drowned, and the others picked up by the commander of one of our brigs anchored near, who shoved off just before the boats were capsized. I took the men I had picked up on board the *Brandywine*, the ship they belonged to, for which, of course, I received hearty thanks. The

American commodore has twice sent to thank our captain for the assistance of our boats in saving their men's lives.

"I mentioned that our chaplain, Jenkins, was in the cutter with me the other day. He was very much frightened; so much so that in the evening he broke a blood-vessel, and is still lying in a very dangerous state. The doctor says it is owing to the shock he received crossing the surf. Even if he recovers, he will be sent home. Poor fellow! we shall be sorry to lose him."

Key describes a soiree at the emperor's palace to celebrate the birthday of his sister, to which he was invited, and with the airy contempt for all that is not British which possesses the young sailor, more perhaps than any class of our island race, he "thinks it was worth going to, merely to see how the goose of an emperor behaved himself." "His sister," he continues, "the Princess Donna Januaria, is a nice-looking girl about twenty. She was the only decently-dressed woman in the room. . . . The lord-chamberlain came to our skipper to say that the princess wished to dance with him. Sir Thomas was by far the handsomest and most gentlemanly-looking man in the room."

Early in September Key witnessed a terrible sight in the arrival of a slaver captured by Lieutenant Cumming[1] in one of the *Frolic's* boats. In effecting the capture he had shot the captain of the slaver, but had found himself alone in boarding her, facing a large crew fully armed. She only measured fifty-five tons, but had 338 slaves on board when she arrived.

Of this occurrence Sir Thomas Pasley writes—

"I went this morning (September 10th), the first thing after breakfast, to see the negroes taken from the slaver and down to the *Crescent* (hulk), and in my life I have never witnessed anything so shocking. About 450 were packed into that small vessel, as you would pack bales of goods; and disease of all sorts became rife among them. One hundred had died before she was taken, and they were, and are still (a month after), dying daily. Some were carried up the side in a state of emaciation such as I would not have imagined possible to exist with life; others with raw sores, their bones all but through them, and some dreadful cases of smallpox, covered from head to foot. These were all sent back to the schooner, being contagious, none such being allowed in the *Crescent*. Some children were in the last stage of emaciation and sores. It was dreadful; and so distressing, I could have cried. The patience, or rather the apathy, with which it was all borne was astonishing.

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[1] Afterwards Admiral Sir Arthur Cumming, K.C.B. Died in 1893.

"Happily for them, they have not the same feelings we have. They were fed immediately they came on board, and soon recovered their spirits. Those who were not ill were ready to sing and dance the next day. Some of the women had infants; but of the other children, whose ages were from five to nine, there were no parents, or none to be discovered amongst the adults. After all these miserable creatures were brought on board, several women came, tolerably well dressed, and fat and sleek—to my great astonishment, till I was told that these were the harem of the prize's crew, and were well fed and taken care of. Ill-looking rascals these crew were, twenty-seven of them, mostly Portuguese. They were all confined in the *Crescent's* prison by night, and left at large in the day-time for the present.

"The officers and men of the *Frolic* were not a little to be pitied who had to live on board such a disgusting vessel, first with the Africans and afterwards when they were removed, for the shocking state of filth, and the stench, was not to be endured, and yet, tracing the smallpox among them, I would not let them communicate with this ship."

How far from our own time these events were, a little note which Sir Thomas Pasley makes brings home to us. The *Fisguard* and *Cormorant* had just arrived from England, and at a drawing-room at the palace their officers arrived in uniform with the present white facings, while all the *Curaçoa's* officers were wearing red facings. Moreover, the newly arrived lieutenants were wearing two epaulettes, while Key and his brother-lieutenants were wearing one only, on the right shoulder.

A sad loss fell upon the ship in the middle of September, when the first-lieutenant, Denison, Key's old and dear friend, was invalided for epilepsy, and had to be sent home. All, and not least Sir Thomas Pasley himself, were in great grief over this loss. Sir Thomas had the highest regard for him, and greatly feared that his loss could not be supplied.[1] Lieutenant Knott, who had arrived in the *Cormorant*, on his way to join the *Dublin* on the Pacific station, was appointed to fill Denison's vacancy, and remained first-lieutenant till Key left the *Curaçoa*.

The ship lay at Rio until 4th October, when she proceeded to Bahia. Key's somewhat uneventful life had meantime been only broken by a few days' shooting trip up the river, which he much enjoyed.

Bahia was reached on the 19th of October, and the passage there had been enlivened by some racing with

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[1] Mr. Denison died a few months after leaving the *Curaçoa*.

H.M.S. *Satellite.* The trim of the *Curaçoa* having been altered by shifting the quarter-deck guns into the bow-ports, and putting fourteen tons of water into the fore-hold, the ship went faster than she had ever yet done—ten knots with all the starboard studding sails set.

At Bahia, Key and three other officers made a three or four days' snipe-shooting trip up the river. Key had never shot snipe before, but there were plenty of them, and fair bags were made. He expresses astonishment at finding himself so good a snipe shot; but it was part of his nature to fit readily into whatever he took up, and, though never what is properly called "a sportsman," he took very kindly to any kind of sport that came in his way to the end of his life. On this trip he was surprised and gratified to meet great civility from the lower orders of the Brazilians. The British were in exceedingly bad odour with the coast population at this time on account of their operations against the slave trade. It was not always safe for known officers who had been active in their duty to be alone on shore; but probably the feeling—as in the case mentioned by Key—did not penetrate much beyond the coast-line.

After a ten days' stay at Bahia the *Curaçoa* passed on to Pernambuco, arriving there on 6th November. Of the short voyage, Key writes—

> "Our passage up has been quite devoid of interest,—I mean in the way of incident; but for myself and my own feelings, I have derived great pleasure from it, as I am in hopes that I have materially improved in the discipline of my mind. For instance, I find that during the last two months I have read a great deal more and more regularly than I ever was in the habit of doing before. I find that I can fix my attention better on anything I am employed about. I never, or seldom, find time hang heavy on my hands. When I have a spare five minutes on my hands during the day, I generally have something ready for employing it, and I never allow myself more than six hours in bed."

These words are an illustration of the inner seriousness, so to call it, of Key's character. He possessed a theory of life which it was his constant aim to act up to. In a good deal of close intercourse with him in his later life, I have only the recollection of one or two cases where he drew the conversation to what we understand as the inner life, but I always had the feeling about him that the inner life was with him always in close contact with and governing the outer.

On the voyage out from England he described himself as constantly reading a book which he calls *Culture and Direction of the Mind*, and he had read it three times through before the ship reached Rio. Now he was reading—

> "*Plain Sermons*, reading one nearly every morning before breakfast. They are beautifully written, and I really do not think I could pick out any twenty or thirty sermons so well suited to myself as the first volume of the *Plain Sermons*."

Some power of will was clearly necessary to take up these studies by a lieutenant who was on deck as officer of the watch eight hours out of every twenty-four, and carried out the gunnery duties, in themselves generally considered a full day's work, at the same time.

But even these gunnery duties, when we get a glimpse of their actual character, throw us back in time as everything else does—

> "The second day after our arrival," writes Key, "I asked the captain to let me exercise the men firing at a target,—there is a very heavy swell here, and as the ship rolls, it is very different practice from that in the *Excellent*. We commenced in the forenoon. I laid out the target myself, that is, anchored a cask at a distance of 500 yards from the ship, by taking the angle subtended by the ship's mast. The firing was excellent; we were obliged to send out four new targets during the forenoon. But what pleased me most was that the *Excellent* men we have on board were the four best shots in the ship. I may say, I had a good laugh at the fellows who run them down."

The old-world air about all this lies chiefly in the three points—that the *Curaçoa* had now been more than eight months in commission, and yet this was the first time she had had any target practice; secondly, that the practice should have been carried out at anchor; and thirdly, that the target should have been placed only 500 yards off. It is all of an age one hundred and fifty years ago almost, and the only thing which perhaps survives is the jealousy of the *Excellent*. It has been traditional with those who were not of the gunnery school to cast scorn on that innovation, and perhaps the novelty has not yet wholly established itself in the conservative naval mind.

The old world was likewise governing the mails at this time. Key only got on the 12th November answers to letters written from Rio in the middle of July, and his letter in return, despatched on the first-mentioned date,—written on letter-paper and sealed as before the days of envelopes,—did not reach his home till the 31st December.

Some cloud had ruffled the smooth surface of Key's love for his family at this time. He accuses himself of writing a "hasty" letter from Rio, and of indulging his "hasty temper" when at home. He declares that when at home he is seen "in a false position," and "not in his element." The words read strangely to those who, like myself, must regard Key as having been a marvel of good temper, as even lacking that "spice of the devil" which has scarcely ever been absent from the lives of those who have left a mark behind them. I should suppose that, in the remarkable warmth of his love for those he had left at home, acts and words seemed unkind which did not really bear that stigma.

The *Curaçoa* was back at Bahia again on the 18th of November, and put to sea for the southward on the 30th.

Key had had an idea that the ship might be ordered on to the Pacific station, and appears to have been somewhat weary of South America as far as he had seen it, with no sort of prescience of what South America was presently to do for him. The climate and even the temperatures of Bahia and Pernambuco merited his praise; they were, for the tropics, delightfully cool and fresh, and held to be very healthy indeed—

> "I think I never met," he says, "within the tropics or without, a more beautiful and apparently healthy climate than that of Bahia and Pernambuco. Here we are within a month of the middle of summer, with the thermometer never higher than 83° in the shade. And situated within 13° of the line! The air is beautifully cool, and about 10 a.m. we invariably have a delicious sea breeze."

This was one side of it, but there was another—

> "Everybody says we are booked for the Brazils for four years. Is it not

dreadful? You must find my letters very uninteresting, I am sure. But if you knew what stupid towns and people the Brazilians are, you would not expect any interesting description of them. They have one redeeming point, which is, that they all agree in cordially hating the English."

A hint of one of the sides of Key's mind, which is presently to show itself in important practical work, and which has been several times noticed in these pages, is a lament which he utters about this time over the non-arrival of the numbers of the *Civil Engineers' and Architects' Journal.* But he was in some way consoled by a long and affectionate letter from his old friend Holland, who had happily married, and described the tours abroad and at home which he had had with his bride.

Back at Rio again by 6th December, Key writes—

"The packet does not sail for some days, but this morning the captain came on board and told us to keep ourselves in readiness for sea, as there is a brig up the harbour with a large quantity of doubloons on board, and fitted with a slave deck and all the forbidden articles required for the slave trade. She is expected to sail this afternoon or to-morrow morning, and therefore, as we may be in chase of her some time, and the packet may sail before we return, I think I had better send this at once. We anchored here on the 6th, just at the commencement of a heavy south-west gale, which lasted about twelve hours. . . .

"Everything here is as slow and dull as usual, that is to say, on shore. The commodore[1] is still in the river Plate; they say there is to be a grand action between the Buenos Ayreans and the Monte Videans; a great number of Frenchmen have taken up arms in favour of the latter. The commodore remains there till something is settled between them, to protect our merchants, and then comes to Rio, and will send us to Monte Video.

"The climate of this country is superb. The warm weather is fast setting in, but as yet it is as cool as we could wish. One of our messmates, poor fellow, has not found this place so healthy. Baker, our marine officer, is on his deathbed in a consumption; he cannot live long. We sent him on shore this morning to sick-quarters.[2]

"I forget now whether I told you of Arthur Cumming, one of the lieutenants of *Frolic*, who brought a slaver in here. The slaves had the smallpox in the same manner as in the one I was in in the West Indies. Poor Arthur, after he had rejoined his brig a few days, was attacked with smallpox and sent home. He is as fine a fellow as there is in the service. He is the mate who led the Turks over a bridge at Sidon the other day. I think I told you about it,—as gallant an affair as has been done for some time.

"The great advantage of lying at Rio is that ships either going out to or coming from 'round the Horn,' the Cape, East Indies, or China stations, invariably touch here; and we are sure to find some old messmate on board.

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[1] J. B. Purvis, a captain of 1809. Died a vice-admiral in 1857.

[2] He died soon after being landed.

The *Pilot* is now here on her way to China, and Oliver Jones is first of her.[1] You have heard me mention his name, I think; he gained the first commission at the College. . . .

"If we take this slaver we are going out in chase of, I shall have to take her either to the Cape or Barbados, where she will be condemned. I shall not mind that in an empty slaver; the only bore is how to join one's ship again after she is condemned. I am longing so for the December packet to arrive, to bring news of Denison's arrival and complete restoration to health. Sir Thomas Pasley and myself are continually talking about him; he is very fond of him. . . .

"We have been in daily expectation of getting under way in chase of the slaver I mentioned; and now we sail on Tuesday to convoy a merchant barque that has been chartered to take 300 liberated slaves to Demerara. I am not sorry to leave Rio, as the heat in January and February in this harbour is, they say, insupportable. . . .

"I am beginning to like this place a little better than I did. The Minister-plenipo' is a most gentlemanly man. Carmichael[2] and myself are very intimate with him. He is a Mr. Hamilton; there is but one person between him and the Dukedom of Hamilton. I am also domesticated with the Danish minister and family, *i.e.* I walk in and 'take tea' when I please."

As noted in the foregoing letter, the *Curaçoa* sailed in company with the hired transport *Lancashire Witch* on the 27th of December, and did not return till the 12th of January 1844—

"On our arrival," Key writes, "we heard that Captain Willis[3] of *Frolic*, and one of his officers, had been attacked on shore at Santos Bay (a celebrated slave port about 200 miles south-west of Rio), and were lying in a dangerous state on board. The surgeon of *Frolic* would not allow them to proceed to sea, and as they were short of provisions we sailed for Santos to supply her. On our arrival there we found that what we had heard was too true. The facts are these. The *Frolic* has been stationed off Santos for some time to aid in the suppression of the slave trade, and had annoyed the Brazilians very much by the captures they had made, and also by their having blockaded for three weeks two slave brigs in the port of Santos. One afternoon Captain Willis, his master (May), and the captain's steward, landed to walk to the town, the nearest way to which was by a narrow lane about three miles in length. It being broad daylight, they probably went on shore without their swords; and although May had a brace of pistols in his pocket, he did not load them. On their return, a little after sunset, the commander and May were walking together, and the steward a little behind them, when they heard the steward call out. They ran towards him, and just had time to see that there were seven Brazilians, armed with bludgeons, when they were knocked down, and remembered nothing further. These ruffians had beaten them most unmercifully, thrown them into a ditch, and left them for dead. A Brazilian gentleman passed by about an hour after, picked them up, and with the assistance of some others sent them on board. Captain Willis has his skull fractured, his head severely cut in two places, his arm and two fingers badly broken. May escaped much better, having sustained no serious injury beyond a broken head, and most awfully bruised all over. The steward had his thigh broken and some other minor injuries.

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[1] "First" is first-lieutenant. Oliver Jones became a captain in 1855. He retired in 1871, and died a rear-admiral in 1877.

[2] Lieut. Thomas Carmichael of the *Curaçoa*.

[3] Captain Willis never got over his injuries. He was granted a pension for his wounds in 1848, became a captain of Greenwich Hospital in 1856, and died in 1863.

"We immediately sent on shore to the police to make them find out the offenders, and they have seven men in custody, but only one of them can be sworn to; they are the crew of one of the brigs in Santos."

It has been seen all through this narrative that Key's nature, or motive in life, second to that of the desire of filling absolutely whatever post he occupied, was to be abreast of the times. He seems always to have been struck more by what was coming than by what was past, and now for months he had been brooding over a decision which was in entire accordance with the spirit that was in him, and which was at the same time to form a landmark in the plain of his life.

He foresaw that steam was coming to sweep away the old navy, and that it behoved him, if he were to take the place his ambition pointed at, he must ally himself with steam at the earliest possible moment. I will let him tell his own story, which he does in the letter last quoted, and which was written from Rio on 26th January 1844—

"After much consideration and mature deliberation I have come to the determination that the only way to get on in the service by one's own exertions, in these times of peace, is to join a steamer and to follow it up. About two months ago I came to this conclusion, and immediately acted upon it by going to Sir Thomas Pasley, explaining all my reasons, and requesting him to assist me in exchanging with Lord A. Beauclerk of the *Gorgon*, as I had heard of a little misunderstanding between his lordship and Captain Hotham. I talked Sir Thomas over, and he entered into my views completely, although in a manner very flattering to me, and said he would write to the commodore about it (the *Gorgon* is stationed in the river Plate). I the same evening wrote to Lord Amelius, and three days ago, on our arrival from Santos, we found answers, accompanied by the captain's orders to proceed immediately to the river Plate. It is all settled excepting the official order from the commodore, which I shall receive on our arrival. During these two months of preliminary arrangements, no one in the ship, with the exception of the captain and Carmichael, have known a word about it. I did not write to you till it was all settled, as it would have been useless had anything prevented the exchange, but till you hear of my being actually on board, will you direct to *Curaçoa*? I dread the idea of leaving this ship; she is so comfortable, we all act so well together, and the captain is so

> superior a man. In fact, on board this ship there is not a single thing I should wish altered. I am going into the strictest vessel on the station, and where I do not know one of my messmates. I have for once chosen for myself; I trust it may be for the best."

On all grounds Key's decision was a remarkable one for a young man to make. At this time, and for many years afterwards, current opinion in the messes thoroughly despised the growing propulsive power. "Steamer's midshipman," "steamer's lieutenant," were terms of opprobrium in the rising generation, and even the captains and commanders who commanded steamers were regarded as a lower grade of officer, lost to the traditions of the service, and out of the running in the matter of distinguishment. It needed no common discrimination in so young a man to see that he who wished to reach the head of the profession ought to attach himself to the newest element in it; and no common resolution to part with present comfort, and to break with all pleasant associations, in acting on the judgment formed.

Generally speaking, it is accepted as an axiom in the navy, that as no one knows what a day may bring forth in the way of opportunity for distinction, it is better to trust to fate than to select posts which probably may, but possibly may not, afford the desired openings, unless the ground is pretty secure. Key, in electing to change from the sailing frigate to the steam "vessel," was acting on general principles, and could reap no immediate advantage unless it arose from the condition that he would pass from being junior lieutenant of the sailing ship to second-lieutenant of the steamer.

But the mark the young officer had already made, and the esteem in which he was held, whether personally or by reputation, is strongly brought out in the contemporary opinion of the captain whose ship he was leaving, as well as of his to whose ship he was going.

Sir Thomas Pasley writes in his journal, under date 14th February 1844—

> "I quite omitted to mention on Monday last that Mr. Key left the ship, and Lord Amelius Beauclerk joined from *Gorgon*, they having exchanged. A greater

loss to me than Key is could not have happened in the ship, and I believe the feeling is general among officers and men."

And here I trust I may be pardoned for intruding a reflection in memory of a chief who was very dear to me when I served under him, and who, during his whole career in the navy, attracted the regard and respect of all who came in contact with him. It was only like Sir Thomas Pasley that he should have fallen so readily into promoting what he hoped might be the advancement of one of his officers, and putting himself and his own convenience and satisfaction so entirely on one side. It is, every captain of a man-of-war must know from experience, no common wrench to lose an officer who is not only a *persona grata* to himself, but on whom must hang to a great extent the comfort and order of the ship, and therefore the captain's reputation. Nine men out of ten in Sir Thomas Pasley's place would have dissuaded his officer from taking the step Key proposed to himself. He could easily have done it without disclosing the motive. Many men might have experienced a sense of bitterness against an officer parting from him under such conditions. But neither on the side of the captain nor of the lieutenant did this kind of feeling exist. A word would have held Key in the *Curaçoa*, but the word was never uttered,—never perhaps contemplated,—and the warm friendship founded in the *Curaçoa* between Pasley and Key was cemented years after when I became closely connected with both of them together, and it remained untouched as long as they both lived.

Captain Hotham of the *Gorgon* writes to Key, under date 1st January 1844—

> "Our interview at Portsmouth was to me so satisfactory that I rejoice I am likely to benefit by your services as lieutenant of the *Gorgon*. I would have proposed the subject to you before had not a sense of right and wrong towards Sir Thomas Pasley restrained me. As it is, I can only express a hope that future experience may not induce you to lament the exchange."

The reputation which Key had already gained was indeed extraordinary for a lieutenant of only a year's standing; and though his change into the *Gorgon* was to culminate in much higher reputation and very early promotion, owing to special circumstances, it is impossible to doubt that the mark of distinction was already borne by the young officer, and would in any case have shown itself in early advancement.

The *Curaçoa* reached Monte Video on the 4th of February 1844, and the exchange was effected between the lieutenants of the *Curaçoa* and *Gorgon* a week later.

CHAPTER VI

THE *GORGON*—1844–1845

THE ship on board of which Key now found himself was of a late type. In the *Navy List* she was entered as a 6-gun "steam vessel," but was more commonly called a "steam frigate," though lacking the chief characteristic of a frigate, in having no gun-deck below the upper-deck. All her guns were on the upper-deck, and arranged chiefly on what were called "traversing carriages" about the bow and stern. She had been built at Woolwich in the year 1837, and measured 1108 tons, which would give a displacement, as now calculated, of about 1613 tons. She was driven by common paddle-wheels; but as the screw had not yet made its appearance in 1843, there was no need to specify, as was done later, the nature of the mode of propulsion. Her nominal horse-power was 320, probably about 800 indicated horse-power as now calculated. She had the peculiarity of copper boilers, but her speed was only quoted at eight and a half knots.

The *Gorgon* had been commissioned in December 1842 by her present captain, Charles Hotham.[1] Her first duty had been to carry out Mr. Wilson, Chargé d'Affaires, to Venezuela, and she had landed him there on 1st April

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[1] Captain Charles Hotham. He was made a K.C.B. for his services in the river Plate; became commodore on the West Coast of Africa, and in 1854 was appointed Governor of Victoria in Australia. He died at Melbourne in 1855.

Her other officers were, at the beginning of 1844—Lieutenants, A. J. Woodley and W. Horton, and then R. E. Smith; first-lieutenant of marines, Jos. E. W. Lawrence; master, H. Baker (acting); purser, Wm. Young; surgeon, Peter Niddrie, M.D.; second master, Thos. Arundel. The present Admiral Sir Leopold M'Clintock was a mate on board at the same time.

1843. She had then passed down the South American coast, touching at various ports on the way. She had been in the river Plate, and chiefly at Monte Video, since the 18th of June 1843.

For years there had been rivalry and turmoil between the inhabitants of the right and left banks of the river Plate, necessitating the constant presence of the warships of different nations to protect the interests of their subjects. It was this duty which had kept the *Gorgon* so long in the river, and had brought the *Curaçoa* to join her. Commodore Purvis, in the *Alfred*, was now in command of the British ships, and there were also French and American war vessels present.

Key's first letter from the *Gorgon* gives not only an account of his own situation as it appeared to him, but a very concise account of the political condition of the Argentine territories—

"In a few days after we anchored I had the commodore's official approval of our exchange, and, the day following, his lordship's cabin and my own exchanged owners; and here I am. Although for the first few days I was miserable at leaving my old messmates and captain, and that not merely on account of the change, but because I could see at a glance that those on board the *Gorgon* are decidedly inferior, yet I never for a moment have repented of the step I have taken. In fact, I assure you that I am most ambitious to rise in my profession, and am ready to make any sacrifice to gain advancement in the service. . . . I am anxious to hear [Denison's] opinion of my exchange, as well as yours and my father's. I mention Denison first, as of course he will understand the circumstance more clearly than you will on first hearing of it. At the same time, I think that you must see the advantage of it. A few years ago I should never have thought of leaving a man like Sir Thomas Pasley, but I think I have now arrived at an age so as to be in a manner independent of any captain, and ought not to allow my ideas of comfort to interfere with what I consider a step towards my advancement in the service. You may imagine that I appear to dwell too much on such a trifling subject as a change of ship; but in my case I consider it of great importance, as I have almost made it *a change of profession*, intending for the future to devote myself exclusively, or nearly so, to steam navigation.

"And now I suppose I must tell you something concerning the Monte Videan war. The origin of it is this:—Owing to the difficulty of the navigation of the river Plate, and Monte Video being situate 180 miles lower down than Buenos Ayres,[1] the former, although not so powerful a republic as the latter, has monopolised a large proportion of the trade of the river. Rosas, the President of

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[1] This is not quite correct. Monte Video is about 110 miles only from Buenos Ayres.

Buenos Ayres, has been on the lookout for an excuse to declare war with Monte Video, and about two years ago, during the French blockade of Buenos Ayres, the Monte Videans foolishly assisted the French fleet. About this time Oribé was President of Monte Video, having been elected for the usual term of five years. Shortly after his election he found that a very strong party had risen against him, and would most likely turn him out; he therefore resigned. After his resignation he went to Rosas, stating his grievances, and the latter, glad of having a general like Oribé to assist him, after a short time gave him command of the whole Buenos Ayrean army. Oribé, after marching down the northern bank of the river, committing the most unheard-of atrocities, on the 16th of February encamped under the walls of Monte Video. The Buenos Ayrean fleet are cruising at the mouth of the river, and have established a blockade, which we (the European powers) have recognised.

"Riviera was the man elected President in the room of Oribé, and he is general-in-chief of the 'Colorados,' or 'reds,' so called to distinguish them from Oribé's party, the 'Blancillos,'[1] or 'whites.' Since the siege of Monte Video commenced, Riviera has been in the country in command of the cavalry (about 2000), harassing the rear of Oribé's army and collecting forces, horses, bullocks, etc., to relieve the town. During the whole year he has never been able to approach the town till the night before last (18th February 1844), when he sent in a force of 1000 horse, driving in 300 bullocks, and each man bringing in a led horse. We saw them force their way through Oribé's outposts, and establish themselves in the mount. General Passe commands the infantry inside the walls, which, including about 3000 French and Italian volunteers, amounts to nearly 8000. This relief of Riviera's in the shape of bullocks has arrived most opportunely, as they were beginning to be nearly starved in the town. We can see a guerilla, or skirmish, from the ships every morning and evening, when each party relieves their outposts. Yesterday we expected a grand action, as we saw Generals Silva and Flores (Colorados), in command of the cavalry, form their troops and march towards Oribé's camp, but they retired after a smart skirmish. Of course we are divided in our opinions on board, some being Colorados and some Blancillos. I am the former.

"I admire Captain Hotham more every day: he is a reserved man, but a first-rate officer, and in every sense of the word a gentleman. His reception of me was most kind, leading me to believe, both by his words and manner, that I was actually doing *him* the favour of joining his ship. I assure you he told me as much.

"Captain Hotham is not a scientific man, but is decidedly a clever man, a good linguist, very well informed in history and politics, and I imagine for a naval man a good diplomatist.

"We are very anxious for the termination of this war, as of course we can buy nothing here, and are obliged to send to Rio for stock at a great expense. We consider ourselves very fortunate in being able to get our clothes washed at seven shillings a dozen.

"I intend writing to Denison by this packet, and I shall ask him to explain to Mr. Hay[2] my reasons for leaving *Curaçoa*, so as to do away with any odium that may be attached to me for exchanging, as I know it is a step never admired at the Admiralty, but I fancy Sir Thomas Pasley will take care that I am not hurt in their opinion.

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[1] Also called, perhaps more generally, "Blancos."

[2] Denison died before he could have received Key's letter. Mr. Hay was probably Mr. J. H. Hay, a senior clerk at the Admiralty.

"*February 20th.*—Bad news for the Colorados. Last night Riviera was sending 1100 bullocks for the relief of the town, when they were surprised by the Blancillos and lost 1000 of them. They have several English colonels on both sides. On the Colorados' there is a man called 'Cockney Sam,' who began life as a London waterman. He rose from that to be captain of the forecastle on board a man-of-war, and here he is, general of division and a first-rate soldier, going by the name of 'General Sammes.' Some of the *Gorgons* the other day went to see him, and in course of conversation expressed a wish to see some fighting. 'Fighting,' said he; 'if you will wait five minutes, I'll get you up a guerilla.' He turned out his troops, and sallied out; they accompanied him to a retired spot, saw half-an-hour's good sport and then returned, well satisfied with Cockney Sam's display. No one is allowed to talk about the war till they have walked out to the outposts and been shot at—a pleasure I experienced the other day."

Key's personal situation, as well as the general and political one, are again well described in his next letter, dated 25th March 1844—

"By the last packet I received your parcel of presents, and by a strange coincidence the drawing utensils arrived most opportunely. Captain Hotham, who is really quite an artist, has been talking to me very often about drawing lately, and I mentioned my intention of commencing it in earnest; he was delighted to hear it, and has offered to give me lessons in sketching, etc.; he has a most beautiful collection of his own drawings, all from nature. His master was a person of the name of Devint, or some name like that; he also knows Prout[1] very well. I am giving him instruction in algebra, etc.

"There is nothing of any interest stirring now; we in the river Plate are quite out of the world, and hear nothing except about our own private war. Since I last wrote, a new French admiral[2] has arrived, and you remember I told you that a great number of Frenchmen had taken up arms inside the town. The old admiral had called on them twice to lay down their arms, and they had refused. The Blancillos were very anxious for the arrival of the new admiral, as they said he intended to enforce his order, and if so the town must fall. On his arrival he published a proclamation calling on them to lay down their arms. They were all assembled, in number about 3000, in the great Plaza de Constitucion, and a copy of the proclamation was given to the captain of each company, who read it aloud; the whole of them were then received before Pachecho, the Minister of War, who made a speech to them, and then asked for their answer. They 'Viva'd' in glorious style, and not one, of course, laid down his arms. The French admiral has taken no notice of it.

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[1] Prout, the artist, had been a patient of Dr. Key, and became a friend of the family, Mrs. Key being herself a good painter. Dr. Key having, according to his custom in such cases, refused a fee, Mr. Prout begged his acceptance of three water colours which hung on the walls of Key's home.

[2] Rear-Admiral Lainé.

"Two days ago I went over to a mount called El Cervo, as I had seen a large body of cavalry march out, and expected an action when I went over. I went first to the Colorado army and found that they did not intend to engage the whole of them, but were merely going to manœuvre to alarm the enemy. On our side there were about 2000, and on the Blancillo about 2500. After performing a good many cavalry evolutions, the Blancos detached a party of skirmishers to annoy them, which they did by extending themselves along the opposite bank of a stream that ran between them, with about twelve yards between each man, and commenced firing at the troops. The Colorados sent about 300 men to drive them back, which they did in good style. There were only about three or four killed and wounded on each side, but from my situation the sight of the hostile bodies of troops manœuvring was very interesting. They continued skirmishing, etc., for about four hours, when they eventually retired—to dinner, I suppose.

"The general of the Colorados had seen us standing there (the master of *Gorgon*[1] was with me), and he sent us an aide-de-camp to ask us to dine with him, but we were just going on board, and therefore declined.

"The climate of this place is very fine, although the weather is changeable,—sudden gales of wind are very common, and also very heavy thunderstorms,—but the temperature is exactly what I like, for I find, however much I may enjoy a tropical climate, that it invariably weakens me, and makes me more subject to headache. It is astonishing how much stronger I feel since I have been here, and not only stronger in body but more able to read and employ myself, which, I can assure you, it is very difficult to do in a tropical climate. . . .

"I shall only be away three years from the time the *Curaçoa* was commissioned, and more than one of those have already gone. In fact, I can nearly say with certainty that I shall be in England by February or March 1846, therefore by the time you receive this, nearly half my time will be up. They never keep steamers in commission more than three years.

"I am now going to lose the *Curaçoa*; she sails to-morrow for Rio.[2] She will be a great loss to me, as I have very excellent friends in Sir Thomas Pasley, Carmichael, and Noddal. The only person I have on board *Gorgon* to replace them is Captain Hotham.

"Every day, my dear mother, shows me that I am what people would generally call very fortunate wherever I go. That is to say, I am peculiarly favoured by Providence under all circumstances. You remember Captain Napier asking me if he should give me a letter from Sir Thomas Bouchier[3] to Commodore Purvis; I accepted it, thinking at the same time that it would be useless, and in fact I probably, on arriving here, would not deliver it. One day, after I had joined the *Gorgon*, Carmichael said to me, 'You lucky dog, Key! we hear the commodore is going to make you flag-lieutenant,[4] and going to give you the first acting vacancy on the station, and all sorts of things.' I thought he was joking, but at the same time 'I kept it dark,' and went on shore to call on the commodore. To my surprise, both he and Mrs. Purvis were very warm in their reception of me (it appears that Sir Thomas Bouchier had written to the commodore himself), who told me that he was under greater obligations to Sir Thomas than to anyone else in the world, and therefore, he said, 'although you know that I have no decided patronage, yet who knows what may turn up! and as I have no followers, I promise you anything I may have in my power to give you.' Was not this unexpected? To add to this, the commodore, a few days afterwards, went on board the *Curaçoa* to inspect her, and of course they went to quarters to exercise the guns; he kept them at it for two hours, and, when the guns were secured, said to Sir Thomas Pasley and the officers: 'Sir Thomas, I have never during my whole period of service seen a ship in such perfect order at her guns as the *Curaçoa*, or altogether such a picture of a man-of-war; may I be introduced to the gunnery officer?'

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[1] H. Baker.

[2] The *Curaçoa* returned on 2nd June.

[3] Sir Thomas Bouchier was a captain of 1827, and K.C.B.

[4] *i.e.* aide-de-camp.

"'It is Mr. Key,' said Sir Thomas, 'who is now on board the *Gorgon*.'

"'Oh, indeed!' said the commodore; 'I know him very well.'

"The next day I dined with him, and you may imagine I was rather pleased. You see that I am 'all right' there.

"I am anxious to hear your opinion of my change of ship; it is strange that I have tumbled on board the *Gorgon*, after all. Do you remember the evening I came up to Sir William Gage[1] about her? And all the while I was thinking of the cab standing at the door with my portmanteau, and I did not know his number!

"Being in a steamer has given me a much greater interest in the service than I had before, from having, I suppose, an object in view to which I feel myself suited.

"You know that it is no expense sending parcels out to me, and I believe Gillott[2] always has it in his power to send them, therefore I have less hesitation in asking you to send (if there is an opportunity), first, a French grammar and some old French books; . . . secondly, to ask Smith & Elder to get for me Appendix C to Tredgold's new edition of *The Steam Engine*, with the plates—from John Wade Weale, 59 High Holborn. From the same person, *Results of Experiments on the Disturbance of the Compass in Iron-built Ships*, by Airey; and Captain Hotham says I ought to have some better paint-brushes, rather large ones. . . . Will you add to the list two little books to give to Majendie and Wortley?[3] I think I should like the *Christian Year* for Wortley, and I cannot spare mine. If there is a small edition of Paley's *Evidences of Christianity*, I should like to give it to Majendie.

"We have heard this morning that the French admiral intends to force the Frenchmen in the town to lay down their arms; if so, the town will be obliged to surrender, and the war will be over; but we expect that they will not lay down their arms so easily, in which case the French admiral will have to land all his men and make them.

"You will find now that as I am writing from the river Plate, although it is only 1100 miles from Rio, this letter will be nearly three months before it reaches you, and of course yours are the same time before I receive them."

Key's ruling passions, if they can be called so, come out as markedly in the latter part of this letter as we have seen them all along. He is still so fond of Paley as to wish his friend to be fond of it also. His companionship with the *Christian Year* is too strong to be broken even for a friend, and the latest books on the sciences which have a practical relation to his life are the subjects of his study. I am sure that readers of this chapter must agree with me that it gives a picture of a remarkably *complete* character, without any consciousness of completeness which could have obtruded itself upon those with whom he was in hourly contact.

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[1] Vice-Admiral of the Red, Sir William Hall Gage was Second Sea Lord of the Admiralty, and in charge of the lieutenants.

[2] Gillott & Co. were then the principal naval outfitters in London.

[3] Appear to have been midshipmen of the *Gorgon*. Majendie died a retired captain in 1873.

I will at this point resume what Professor Burrows has so kindly written for me, as we get an outside view of Key's life at this time, which we have viewed till now from the inside—

"Fortunately," writes Professor Burrows, "as to this period, I possess a letter from Leopold M'Clintock, from which I am allowed by the writer to extract what bears on our subject. This fine officer, who was so soon to become celebrated in a line distinct from that followed by either Key or myself, has not hitherto been mentioned, because, though he formed one in the little group of those who entered and left the College at the same time, he was satisfied with a less extended course of mathematics, and did not appear in the lists against us in the final tournament. He, again, was very like a third brother; finding himself at home at my father's house, and keeping up a friendship which still lasts. He had to endure, on going to sea, the trying position of a mate (which was not bad discipline, but felt all the more keenly after the College life) somewhat longer than myself; for the Admiralty, who had been much pressed by Sir Thomas Hastings and other officers to make a double promotion in my favour, acceded to the request very soon afterwards, and sent my Commission on to the Cape station. Key and M'Clintock found themselves on the South American station, on board the same ship, H.M.S. *Gorgon*, within about a year of their separation at Portsmouth; and the latter writes thus:—

"'Key is now, as he was last half-year' [at College], and 'spoons with hairy integrals' [the College slang, derived, I believe, from Cambridge], when, according to all rules of common-sense, I think he should put away all such absurd stuff as vexatious, and tending to mystify the brain. He is much more the *man* than he used to be, and not so careless. He is quite a ship-keeper, and, I think, is very comfortable in this ship. We both like Captain Hotham, and both are picking up Spanish. Key reads De Tambour and Tredgold daily [two authors on steam, of note in those days], and *I* read something more entertaining—histories, travels, periodicals; and I am going to read Alison's *History of Europe* as soon as it arrives from Rio. Key has turned his whole attention to steam [for which our mathematics scarcely left us any time at College], and perseveres in his studies with a steadiness and application which really surprised me and seemed unaccountable. He often works more in the twenty-four hours than he even did latterly at College,—the lieutenants keep the night watches only, and Key reads all his middle watches,—and till he explained to me, one first watch, how his position and prospects acted as a most powerful stimulant to his exertions, I could not imagine why he worked away at such high pressure. . . . The more I see and know Key the more I esteem and admire him, and I hope sincerely he may enjoy all the happiness which he anticipates. [This, I imagine, is a hint, left unexplained, of some one of the numerous romances in which young lieutenants were engaged in our time, and I daresay are still; but Key was nearly the most susceptible of men.] . . . I do not undertake to tell you all the news,—that I have left Key to do,—but have just written to show you that I do not wish to be quite forgotten. Key ought to be well up in the politics of this wretched country, as he knows the daughter of the Prime Minister, a pretty little animated girl, who has patience enough to listen to his bad Spanish; but I do not think they confine their attention to such a dry subject. Although he has quite given up systematic spooning, he is very fond of nice female society. We shall be off to the coast, I suppose.—Yours very sincerely,

"'F. L. M'Clintock.'"

The shadow of a great disappointment fell upon Key at this time, which had better be told in his own words, under date 23rd April 1844—

"I am much afraid that you will have heard two circumstances concerning me at the same time. The first, that I have joined the *Gorgon*, and immediately afterwards that *Gorgon* is ordered to the coast of Africa. Both true, and 'no mistake.' I daresay you will not want for kind friends to tell you all about the pleasures (?) of the coast, accompanied by long yarns about fever, ruined constitutions, *cum multis aliis*; but let me put you quite at ease as to that. If we do go, we are certainly going to a bad part of the station, the Bight of Benin, but we are in a large roomy vessel; we are with a captain peculiarly careful about the health of his men, and one who, being a single man with a good income, does not care about capturing slavers when it is attended with risking of the men's lives and health up the rivers. We shall be nearly senior officer, and therefore have the choice of healthy cruising-ground. Again, concerning myself, I never in all my life remember being in such health as I am now; and what makes me more confident, my present state of health is the result not only of the beautiful climate of Monte Video, but of my having been able to establish a system of diet, exercise, and study.

"When our orders came out by last packet, you can have no idea of the sensation it created. One man was going to invalid at once, another to leave the service, another asked the commodore to allow him to exchange, a fourth wanted to join the Monte Videan army. The captain was extremely annoyed, and with some reason, as with his interest he had had the choice of a station; and, from his very precarious state of health, he knows that he will not be able to stand the climate. This, combined with his devotion for the service, makes him feel it very acutely, as he is certain to be obliged to invalid the moment he arrives on the coast.

"I really believe I was the only unconcerned listener; and now I must tell you that it is by no means certain that we go after all, as the Buenos Ayrean and Monte Videan ministers, and all the merchants, have sent in letters to the commodore requesting him to detain us on account of Captain Hotham's individual services.

"Now a little about the war. When I last wrote, I told you that the French admiral had issued a proclamation ordering all the French residents (3000) to lay down their arms. On their refusal he became outrageous, declaring that if the Orientale (Monte Videan) authorities did not join [in compelling] them to do so, he would declare war on Monte Video. He then ordered his squadron to get under weigh, and take up positions commanding the principal streets and abreast the forts ready for bombarding, directing the merchant vessels to move out of the way. His squadron attempted to obey the order; one brig ran into and stuck fast in the mud, out of gunshot. A corvette anchored about twice as far out as she was before, and, after all, the only vessel that anchored within gunshot was a 2-gun schooner, and she took up such a position that if it had come on to blow she must have been lost. Well, the people on shore laughed at all this; but the French legion, rather than involve Monte Video in a war, laid down their arms as Frenchmen, and picked them up again as Orientals,—that is to say, they threw off their allegiance to France. The admiral then had no power over them, so he gained nothing by his motion. The war seems still inclined to be interminable.

"The last accounts I received concerning Denison's health from you and himself made me very unhappy; he writes in such low spirits about his nervousness. Whenever you write, if you have seen him, will you always tell me your opinion of his health and appearance, as you will be able to see changes which he cannot. . . .

"I like this place immensely, chiefly from the beautiful climate. I never have been in such good health, only having had one headache during the last month. I am making a great effort to cure my stammering, being convinced it proceeds solely from my excitable temperament and slight constitutional nervousness. I have given up smoking entirely, and strive on all occasions to keep myself free from excitement; and I assure you I am successful. Altogether, my dearest mother, I never remember having been so truly happy as I am at present. With the exception of being away from you, and our dear domestic circle, I have not a care. I have not a wish ungratified. I trust my Heavenly Father will continue to increase my spiritual knowledge, and give me a heart truly thankful for all His blessings. To convince you that I am not deceiving myself, I will tell you what my present state of mind is caused by and founded on. On leaving the *Curaçoa*, where I had friends in whose society I was always delighted to be, I joined a mess of strangers; and although for gentlemanly demeanour, good-nature, education, and general information, they are decidedly superior to most small bodies of men promiscuously thrown together, yet there is no *superior-minded* man among them—no one to whom I can look up for advice; and I cannot make a friend of a man to whom I consider myself superior.

"Now, on that all-important subject, religion, I very much need a worldly adviser; yet, from the fact of my being thrown entirely on my own resources to employ my mind, I naturally feel less every day the want of society, which tends so materially to destroy that calm state of mind so necessary for the proper reception of divine truth. . . .

"This morning, while writing to you about the excellent state of my health, I was rather premature, as I was seized with a bad headache, which lasted about eight hours, completely laying me up.

"We have heard this morning that the commodore has decided on detaining us for the present, as he thinks some crisis is approaching, and he wishes to be properly prepared for it. Our duty will be, directly the town is assaulted, to rush on shore and bring off all the fair 'señoras,' English and Spanish, that we can lay our hands on, as these inhuman monsters spare no one."

Professor Burrows gives me another letter of nearly the same date—

"MY DEAR BURROWS,—Knowing, as I do, the few opportunities you have of communicating with Rio from the Cape, I will not commence growling at you for only having given me one letter for two I have written to you, but now send a third unconditionally. In the first place, you must know that I am in *Gorgon*, with old Clink [the usual term of endearment applied to M'Clintock], having determined that the steam branch of the service is the rising line. I exchanged from the most comfortable ship in the service into *Gorgon*, with Beauclerk, and all the return I get for it is to be immediately ordered to the coast! However, that I do not much mind. I have been in *Gorgon* now about two months, and am much more comfortable than I expected. She has not moved out of the river Plate for ten months, on account of this grand Monte Videan war, of which I daresay you have never heard, and consequently cannot be interested in it. The whole affair is that Monte Video is blockaded and besieged by Rosas' (President of Buenos Ayres) fleet and army. We acknowledge the blockade, but preserve, nominally, a strict neutrality. The French and all other nations have squadrons here, and as usual ourselves and the French lean to opposite sides. As you have no doubt heard at the Cape, *Gorgon* is ordered to the coast immediately. We are in great hopes that through the minister here the commodore will detain us, our services being so valuable. I shall certainly be sorry to leave the river, as I have just commenced to like it, and began to learn Spanish two days ago. Clink, dear fellow, is rather glad than otherwise. Although, as I said before, I am in a comfortable ship, she is quite negatively so. I joined a mess of strangers, and they still remain so after two months acquaintance. They are equally good messmates, agreeable and gentlemanlike, but the only friends I wish to have are Clink and the captain. I think I may except ——; he is a superior-minded man, but wrong-thinking—very.

"This state of things, I find, has one advantage: it throws me more on my own resources for enjoyment, and I assure you I am beginning to be convinced that nothing is more destructive to one's happiness and contentment than what is called going into society [barring, according to 'Clink,' 'one fair spirit for his minister']. I am certainly now very happy.

"The *Iris* has lately arrived from England with the British Chargé d'Affaires for Monte Video, and I send this letter by Heath, who is on board of her. I like him exceedingly. I hope you will see him. [M'Clintock's letter also speaks of meeting Heath 'of College celebrity'—the present Sir Leopold Heath, whose distinguished career is well known.]

"Although these lines are few and uninteresting, they will show you that I have not forgotten my old friend. We may meet, if *Gorgon* goes to the coast. How fortunate you are in having a man like Wainwright as a messmate.[1] I feel myself alone, and you know, my dear fellow, how much I require advice and support; at least, how much I fancy I do. I find, certainly, that being thrown so completely on myself tends to make me infinitely better acquainted with my own character than I could ever expect to be in any other position.

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[1] Professor Burrows says of him: "He also, like Heath and Key, had been a first medallist at the old, and had gained the lieutenant's commission at the New Naval College. We were then serving together on board the *Winchester*, Admiral Percy's flagship."

"Remember me very kindly to all your family, and to Wainwright and Cockburn, and believe me, my dear Burrows, ever your very sincere friend,

"A. COOPER KEY."

I have no more letters of Key's now until four months later than the above, and meantime things momentous to the *Gorgon* and to the fortunes of her young and eager second-lieutenant had happened.

The commodore's detention of the ship, which was intended to be but temporary, became the cause of her enforced detention for a much longer time than was contemplated, and determining events began to show themselves in the form of a moderate breeze from the south-west on the morning of 9th May 1844.

I will let the subject of the Memoir tell the story himself, as I find it recorded in his journal. The journal, by the bye, had always been somewhat intermittent, and he had not written a line in it since leaving the *Curaçoa* until the exciting occurrences which began on 9th May drove him once more to his pen—

"*May 9th*, '44.—On the afternoon of this day a breeze that we had had from the S.W. since the morning was gradually freshening into a gale. Slight indications of an approaching gale had been observed not only from the state of the barometer, but from the appearance of the weather, sky, etc. At sunset, after evening quarters, the glass still falling, the captain ordered the yards and topmasts to be struck; we then veered on our B.B. cable (the only anchor down) to 75 fms., and placed an anchor watch. At midnight the sea had risen considerably, the wind still from the S.W., and the ship riding easy.

"*May 10th, Friday*.—At daylight the gale was evidently increasing, with heavy squalls; the boats and guns were secured afresh; at 7.40 we observed that the ship was driving. . . . Let go small bower-anchor, veered on the cable to 30 fms., and on B.B. to 92 fms.; then lighted the fires and got the steam up. Bent the main trysail; the vessel still driving, veered on small bower to 42 fms. At 9, the steam being up in all the boilers, the ship was attempted to be eased at her anchors by steaming ahead in the squalls, and when the strain appeared the greatest on the cables. The ship was now riding with the wind and sea three points on the port bow. The gale increasing, the main trysail was set, close reefed, to endeavour to keep her head to the sea; ship still setting in towards a reef running off from the fort in the town, and which was now about 1½ cable's length astern of us.

"We now endeavour to pick up the small bower, and then, slipping the best bower, intended steaming with full power, out clear of all danger. From the heavy sea, this we found impracticable; no nippers[1] would hold; although the strain was eased by steaming ahead, the hawse-pipe carried away. Buoys and buoy ropes were now got on the cables, ready for slipping if necessary. At 11 . . . the small bower-cable parted just before the bitts. Vessel still driving; slipped the B.B. cable at the 8th shackle with buoy and buoy rope on it. Steamed ahead with full power, the main trysail set to endeavour to bring her head to the sea. We steamed out in a direction about west, intending to pass to windward of the Brazilian corvettes, . . . and then proceed to seaward. When nearly abreast of the quarter of the Brazilian admiral, finding that from a tremendous squall at the moment that it was impossible to bring her head to the sea, and that by standing on we should foul the Brazilian, the engines were stopped, the staysail shown for a moment; the ship paid off and passed astern of the Brazilian corvette. The full power was then put on her again, but was not sufficient to bring her head to the sea; the ship was therefore approaching Rat Island, a most dangerous vicinity. Four lengths of the small bower-cable were bent on to the sheet-cable; at 11.40 the sheet-anchor was let go, and cable veered to 70 fms. . . . At noon the anchor was holding well, and ship riding easy; the gale had risen fearfully, and no sign of breaking.

"We were now congratulating ourselves on being in a perfectly secure position, being much more sheltered than in our former berth; the stream-anchor of 12 cwt., backed by the large kedge of 9 cwt., was bent on to the 12½ in. hemp towing-cable.

"At 3 the cable of sheet-anchor parted just outside the hawse-pipe, ship's head paid off, drifting in shore to the northward. Let go stream and kedge, and veered to the clinch—vessel still driving—battened the hatches down. The two foremost 32-pounder guns were now slung and got ready for heaving overboard, intending to bend on to them the remainder of the chain cable. Soon after 4 the ship struck the ground aft, apparently on hard sand; the steam was immediately let off, and fires hauled out, ran the water as high as possible in the boilers. The ship was now lying broadside on to the sea driving in shore, the stream [anchor] coming home. At 5 the ship had driven broadside on to the beach on mud bottom, every sea driving her heavily up. Making no water, and apparently straining nothing—seas breaking over us.

"The topmasts were got over the starboard side and forced into the mud to shore the ship up. At 8 the ship had been driven higher up; ship's head N.W., wind W.S.W. 10 ft. water alongside on the lee side, 13 ft. the weather side. 11 in. in the well, and making no water. Carpenter reported ship not strained or damaged in any way. Engineers reported that neither the machinery nor any of the beams in the engine-room were strained in the least — no abatement in the gale. Spliced the main brace [*i.e.* served out an extra allowance of grog], ship's company having been wet through for many hours."

And so the *Gorgon* was high up on the beach, where she was destined to remain immovable until the 15th July, and then was to be pressed towards the sea, as it were, inch by inch, and was not to receive the cheers which greeted the "recovery of the *Gorgon*" until the 30th of October.

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[1] Nippers were the short soft ropes that were wrapped round the cable and the messenger together in weighing the anchor.

This catastrophe, such as it was, became in every way the making of Key's fortunes. The dreaded transfer to the coast of Africa was summarily prevented, and Key's mechanical and inventive turn of mind had so ample a field for its display in the various and novel devices which were employed for the recovery of the ship, that special mention of his services in this respect were conveyed to the Admiralty, who specially commended them in their letter of approval and congratulation to the captain and officers of the *Gorgon*.

After Key's return to England he published a full and detailed account of the persevering efforts which, continued through five months and a half, were at length crowned with complete success. His book bore the title of *A Narrative of the Recovery of H.M.S. "Gorgon"* (Charles Hotham, Esq., Captain), *Stranded in the Bay of Monte Video, May 10th*, 1844." It would be foreign to my purpose to go over the ground taken up in this work. The whole story is there very plainly and lucidly told, and the description proves that, in view of the meagreness of the appliances in use, the *Gorgon's* recovery must take rank as a feat of engineering skill, as well as a remarkable illustration of tenacity of purpose triumphing over great odds.

The steady work for the recovery, which embraced the three main operations of digging out a dock and channel; buoying the ship up by means of "camels" and other air vessels, and forcing movement by means of screws and purchases, was sometimes diversified from the situation of the ship lying between two hostile armies. The ship, and a certain portion of the ground surrounding her, were by agreement made neutral ground, and both sides found occasion to avail themselves of its privileges. On one day a boat from the blockading squadron got too close to the town, and was cut off by boats from Monte Video. She made for the *Gorgon*, and was sheltered there, under the denunciations of the Monte Videan commanders, Oribé's field-pieces had a little engagement with the Monte Videan gunboats, which had arrived to prevent the escape of the whaleboat, and Key notices that interludes of this sort were eminently useful as entertainments to keep up the spirits of the *Gorgons*.

On a later occasion the Monte Videans sent out a party of cavalry which passed along the beach close to the *Gorgon*, and after some time returned with a great capture of cattle and horses. But one trooper was cut off, and only escaped destruction by claiming the neutrality of the *Gorgon*. He left his horse on the beach, which was promptly seized by the Blancos, who demanded the surrender of the man, which Captain Hotham refused. Presently an officer came down and harangued with much gesticulation as to the unfairness of the *Gorgon*, declaring that the man would not be harmed, but would only be compelled to fight it out with a combatant of his own selection. This polite offer was also refused, Captain Hotham reminding him how he had extended protection to the Blanco whaleboat so short a time previously.

Key's letters while the ship was on shore were generally hurried and short, like the following one—

"*Gorgon, July 1st*, 1844.—I have but ten minutes to write to you in; the reason of my hurry, I daresay, will rather please you. Three days ago the captain asked me to draw diagrams and write a description of everything we have done and are doing, to send to the Admiralty; also to calculate the power of everything that has been applied to her. Since he spoke to me (three days) I have had but six hours' sleep, as the captain does not wish it to be known. I therefore work eleven hours a day on the beach, and write all night—do not mention this. I am quite well.

"We are getting on with the ship, but it is tremendous work. We have been nearly three weeks on shore now, and I am afraid have little chance of moving her for some time. But I think we shall be in England in February at latest. I have not a moment to spare, the boat is shoving off."

He was writing daily full notes of all that went on on board; his mind was wholly set on the work surrounding him, in which he took not only a leading but an excited and anxious part. There were losses of life from accidents, and Key writes:—

"I am afraid these two accidents [two men had been killed by the bars of one of the capstans flying out, and another had died of tetanus supervening on an injured arm] occurring so close together (both during the last five days), will dispirit the men; the duty of encouraging them has therefore fallen, at this time more particularly, on the officers. The weather has lately been much against us, having had a great deal of rain, and it is really heavy work for our poor sailors, working *day and night*, *wet through*! as they are obliged to do. There is one thing which buoys us up (I mean the officers), which is our perfect confidence of success; whereas I am afraid that among our men, and I may add in the foreign squadrons and the town of Monte Video, few hopes are entertained; they say it is impossible,—we will prove them all wrong. Oh! if the old ship gets off safe! When I get home, what 'yarns' I shall have to spin to you all at the breakfast table. I wish I was there now, instead of writing to you at 2.30 a.m.! But *jamais esprit*, it will soon be over. What blessings hope and a sanguine disposition are! . . .

"*Monday*, 23*rd* (*September*).—The captain has just been showing me the letters he has written about the ship, etc., and I can tell *you* that this affair will turn out *the* best thing that ever happened to me."

The next letter runs from 18th to 26th October, and is hurried and disjointed from the exhausted and excited condition in which he wrote—

"At last I am enabled to send you a little better news. The day after I wrote my last letter, September 25th, the tide rose higher than usual, and we hove the ship astern 18 ft.! We again made all preparations for another high tide, and on Sunday, October 13th, we hove the ship out of the dock, clear of the sand, and 300 ft. from her original position!!! Is not this a glorious triumph? We are now in the soft mud, in which the ship is embedded to the depth of 3 ft., but we are in comparatively deep water, and although we still have to transport the ship over a distance of two miles in less water than she draws, yet with the means we have applied to lessen her draught it is a very simple operation. We are therefore now waiting for a moderately high tide, and then we shall have the pleasure of anchoring alongside the French and Yankee squadrons, the officers of which have continually declared the impossibility of ever moving the *Gorgon* off the beach. Oh! it is a glorious reward for our labours. Now we may venture to look ahead again a little. I think we may venture to calculate on our leaving this for Rio and England in two months from this date, say New Year's Day; we shall then arrive in England the end of March. Then come court-martial, paying off, new ship, new station, and all their accompaniments. All this depends on whether we find it as easy to heave her through the mud as we anticipate. . . . *October* 23*rd*.—I wrote the foregoing on October 18th. On the 19th the tide rose a little, we therefore commenced heaving at about 4 p.m. We found the ship move steadily through the mud. We therefore continued at the capstans for 11½ hours without a moment's cessation. At 4 next morning we lay down for two hours, then were at work all day, weighing anchors and laying them out afresh. Well! for three successive nights and days we have done exactly the same, and you may imagine that now we are all pretty well worn out. But the result is that now we are three-quarters of a mile from the beach, and will soon be far enough to get our masts in, and most of our stores off, before we heave her clear. Oh! is not this glorious! glorious!

"I really cannot put two ideas together, so you must not expect much more from me now. . . .

"*26th.*—We hove her out three-quarters of a mile last night, heaving from 8 till 3."

When the *Gorgon* got finally out into deep water on the 30th, and received the international cheers of the ships surrounding her, she was a mere shell. She had neither masts, bowsprit, nor paddle-wheels. All her stores were left behind on the beach, all her weights removable had been taken out of her, even to the plates of her coal bunkers. She had not completed the replacement of these things until 12th January, when she anchored in the outer roads. Then on the 14th she proceeded to Rio for that examination and repair which, according to the state in which she was found, might be either for the return to the river Plate or for the voyage to England, as Key had surmised.

The ship's "full speed" of seven and a half knots brought her to Rio on 23rd January, and there the diving dress which had interested the young volunteer ten years before at Spithead, and yet was still a novelty, found a closer interest for the young lieutenant in enabling reports of the state of the ship's bottom to be made.

The statement was that the whole of the false keel was gone, and part of the forefoot knocked away. But the bottom otherwise was intact. On the 29th of January a new admiral—Rear-Admiral Thomas, in the *Dublin* frigate—arrived, and the decision was, that as affairs in the river Plate were growing more and more towards that state of tension which would demand international interference, the *Gorgon* should return thither.

CHAPTER VII

FANNY AND *GORGON*—1845–1846

THE determination having been come to by the Governments of Great Britain, France, and Brazil that the general anarchy and check to trade and prosperity developed by the operations of Rosas against Uruguay should come to an end, and Rosas proving intractable, preparations for serious measures against him were made. Those which immediately concerned the subject of this Memoir were the hiring and arming of the brig *Fanny*—

"I wrote a few days ago by packet," says Key on the 18th August 1845, "but, an event of some importance to me having since occurred, I now write by a merchant vessel. I am in command of a brig, a vessel that has been hired for service during the war here, to mount two long 32-pounders. I have been selected out of the whole squadron to command, although I do not know the admiral, and have never even been introduced to him."

The next letter is under date, *Fanny*, river Plate, 12th October 1845—

"I have this time been longer from home than any time before; it does seem to me that the two years I spent in the West Indian station appeared to be a century compared to this. The truth is, I have been constantly employed—whether well or ill employed, *quien sabe?* as the Spaniards say, but employed; and at the present time more so than ever. To-day is the first leisure day I have had for weeks, and it is now, very strangely, caused by a heavy gale of wind.

"I think I last wrote to A—— before the capture of Colonia, and shortly after my appointment to the *Fanny*. I will give you a brief outline of our proceedings since, which have occupied a space of about six weeks.

"Colonia is a town on the north side of the river Plate, nearly opposite Buenos Ayres, containing between 12,000 and 14,000 inhabitants. When we declared our intention of forcibly intervening to eject the Buenos Ayrean army from Banda Oriental, this town, which is in the latter province, was occupied by a portion of the said army. One of our first steps was therefore to take possession of it, and put it into the hands of the Monte Videans, the proper owners.

On the 28th August the admiral [Rear-Admiral Samuel Hood Inglefield, C.B.[1]] on board the *Firebrand*, the *Gorgon*, *Satellite*, *Philomel*, and *Dolphin*, went over to bombard the town. I accompanied the squadron in *Fanny*; but, as we then had no guns on board, did not take up a position for bombarding, but went on board *Gorgon* to do my duty at my old quarters. The account of the bombarding, I suppose, you have read in the papers. It was a paltry affair; they only returned a few shots, and then retired to the country. The small-arm men and marines were immediately landed under command of Captain Hotham. I was landed as his aide-de-camp; we marched up after the enemy, but after a short skirmish they scampered off far into the country. We remained on shore six days, repairing the fortifications and putting the town in a complete state for defence, having little skirmishes daily, in which only one lieutenant was wounded in the head by a musket ball. When the fortifications were complete we gave the town into the hands of the Monte Videans, and then re-embarked.

"The *Fanny* had then a long 32-pounder put on board of her and forty men, making a perfect man-of-war of her.

"A squadron under command of Captain Hotham in *Gorgon*, consisting of, besides his own ship, the *Acorn* (Commander J. E. Bingham), *Philomel* (Commander B. J. Sulivan), *Dolphin* (Lieutenant Levinge), and *Fanny*, was ordered to proceed up the river Uruguay, to act in conjunction with the Monte Videan squadron. This was an interesting expedition. We were going up a river on a warlike mission, where man-of-war had never before been; without charts or pilots, and also where everybody who knew the country said it was impossible for any but small boats to navigate. All the little incidents of our cruise I will detail to you at our summer tea-table, or walking on Row-dow[2] with my father and a cigar. I have not time to do so now. It will suffice to say that our expedition was a very interesting one; we got all the squadron to Paisandu (*vide* maps), and when there, received orders to return to the mouth of the Paranà, and then to proceed up that river with fresh instructions. I found an independent command very enjoyable. I would rather command in a hut than serve in a palace!

"Immediately on sailing from Paisandu, Captain Hotham ordered me to proceed in *Fanny* to Monte Video with despatches. I am come now to the entrance of the Uruguay, and am detained there by a tremendous S.E. gale, blowing at this moment. I have indeed had plenty to do; alone with forty men, being captain, first-lieutenant, master, purser, pilot, boatswain, and everything else. Directly this breeze is over I join the admiral at Monte Video, looking into Buenos Ayres to *Curaçoa* on my way, and most likely I shall be sent by the admiral with fresh despatches to Captain Hotham, and ordered to join his squadron, which is now to be reinforced by *Firebrand* and one other ship, and then proceed up the Paranà, where we shall have plenty of fighting, as they have forts on each side all the way up. My organ of destructiveness is getting very active, I am sorry to say. . . .

"*Thursday morning, October 9th.*—I have passed such a night! Never do I wish again to see its equal—the most tremendous gale I have ever seen! I went on deck yesterday evening after writing the above, and have not had my clothes off since. I was up the whole night in the rain, expecting to part our cables and drive ashore every minute. At about 12 a brigantine, the only vessel anchored near us, parted her cables and drove past us,—we of course could render her no assistance; it was awfully dark, we could just see her as she flew past. Imagine my anxiety, thinking our turn would come next. To add to it, a heavy sea struck our boat and washed it away—our only boat! This morning the gale has abated,—no signs, however, of the unfortunate brigantine. We have dragged our anchors nearly a mile during the night, but most fortunately I had anchored the brig in the centre of the channel, which is very narrow, about quarter of a mile broad, with sand banks on each side. We had providentially drifted right up the channel.

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[1] The father of the late Admiral Sir Edward Inglefield.

[2] A corruption of Rough Down, a steep common with chalk pits near his father's house—The Lawn, Boxmoor.

"*Saturday, October 11th.*—During the last two days I have been pretty busy. After writing this I weighed in the *Fanny* to proceed with my despatches, running down the river Uruguay with a strong breeze and a tremendous current; at about —— we struck on a sand bank, hard; the tide swept us up into 5 feet water, although the brig draws 8 feet. I laid out anchors and cables, and by 2 a.m. I had the brig afloat. Again weighed the next morning at 4 a.m., and proceeded down the river; at 8 a.m. struck again on a sand bank, laid out anchors and chain cables, and in four hours had the brig afloat, having hove her quarter of a mile over a sand bank in a foot less water than she draws. When afloat, I again weighed, and arrived at Colonia last night, and it is now blowing a hard gale.

"How thankful I ought to be that the two days I was aground were the only fine days we have had, and for having got off so quickly. The *Gorgon*, *Philomel*, and *Dolphin* have all been on shore frequently up the river. In fact, it is unavoidable, but sometimes they have remained two and three days.

"The 65th Regiment of foot have arrived here, but whether they take part in the war I know not.

"*Sunday, October 12th.*—I have just concluded the performance of divine service on as lovely a day and scene as I have ever witnessed. My heart is full! It is so seldom . . . in these stirring times that I can turn my thoughts upward —except in morning and evening prayers, and, I am sorry to say, more in times of danger than of prosperity. But that is our nature. What numberless blessings I have to be thankful for! . . .

"To-morrow is the anniversary of heaving *Gorgon* off!"

Later on, two squadrons—one English and one French —were formed for the purpose of forcing the passage of the Paranà, and opening it up to that commerce which Rosas had put a stop to. The British squadron consisted of the *Gorgon* (Captain Hotham), the *Firebrand* (Captain Hope), both paddle steamers; the *Philomel*, surveying brig (Commander Sulivan); *Comus*, sailing sloop (Commander Inglefield); *Dolphin* (Lieutenant Levinge); and *Fanny* (Lieutenant Key), brig. The French ships were the *San Martin* (Captain Trèhouart), corvette; the *Fulton*, paddle steamer; the *Expeditive*, *Pandour*, and *Procida*, sailing ships. These proceeded up the river till they met the batteries and the barrier of chained vessels that Rosas had stretched across the river. Key describes what followed—

"OFF THE FORTS OF OBLIGADO, RIO PARANÀ,
"*Nov. 22nd*, 1845.

"Again it has pleased Providence to watch over me in the midst of danger! Would that I deserved it!

"I think I have told you that we expected great resistance to our passage up the Paranà. We have found much more than we expected. I have not much time, so I must tell you in few words. We knew that Rosas had concentrated all his force at a place called Obligado, about 100 miles from the entrance of the river. We sailed up this 100 miles without meeting any of the enemy. On the evening of November 18th we anchored about three miles below Obligado, and remained the 19th to arrange the plan of attack. The force and disposition of the army and artillery we learned from a few men who deserted to us, and on the morning of the 20th we commenced the attack.

"I will sketch a rough plan for you. Here it is. Look at it.[1] The places I have marked for the ships are those they were intended to take up in the plan drawn out by Captain Hotham before the action. Well, on the evening of the 19th we—that is, the captains of each ship—were summoned on board *Gorgon* to receive our orders. They were too long to explain now, but the last was that the *Philomel's* signal would be made to weigh at 7 a.m. on the 20th (if the wind was fair), and the other captains would exercise their own judgments to weigh, so that every ship should be at her appointed station at the same moment.

"The wind was not fair at 7, but at 8.30 a breeze sprang up, the signal was made. I weighed instantly in company with *Philomel*, the French *Expeditive* also. The *Philomel* and *Fanny*, however, outsailed her, and we stood on alone—the leading ships—to the forts. The other ships had weighed, and were standing along the right-hand bank. When the *Philomel* and ourselves, with *Expeditive* and *Procida* astern of us, had arrived within 900 yards of the forts, they opened on us. Oh! what can I compare it to? It was a perfect hailstorm. To brave this, unsupported, for half an hour! I ordered my men below, except the gun's crew. Every shot told on our hull and rigging. The *Philomel* was close to us, and I saw her first-lieutenant, Doyle, struck almost immediately. We stood on under this to our stations and anchored, and then opened fire in return. The *Expeditive* and *Procida* had their rigging so much cut up that they dropped astern.

"Meanwhile the other ships had come up to their stations, and the fire was more equally divided.

"We were all now pretty nearly in the places marked on chart,—*a*, *b*, *c*, and *d* directed our fire more particularly on batteries 1 and 2, the remainder on 3 and 4. The enemy kept up an incessant fire, although we could see that our shot caused great havoc amongst them. They fired beautifully, but, fortunately for us, pointed principally at the French ships, who evidently were suffering severely.

"Although the *Fanny* was closer to the forts than any ship, except *Dolphin* and *San Martin*, to our surprise no one was even wounded; the shot continually striking us. Our windlass was shivered, best bower-cable shot away, and numerous shot in the hull, but most of them cut our rigging and sails, which were riddled.

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[1] This plan has, unfortunately, not been preserved.

"We commenced firing at a quarter before ten. At about twelve Captain Hope of *Firebrand* went away with his armourers and blacksmith in his boat, pulled up under all the fire, and cut through the chain moored across the river, leaving a passage for us to pass up. The steamers then weighed, and, passing through the opening, anchored above the forts so as to enfilade them. This evidently disheartened the enemy. Their fire slackened, and at the same time a large schooner of war, which was anchored above the chains and had kept up an incessant fire, blew up.

"Our exertions were redoubled. The *San Martin* and *Dolphin* were so cut up that they were obliged to drop away. The firing continued without interruption till 5 p.m.—seven hours! Captain Hotham then made the signal for boats manned and armed to rendezvous on board *Gorgon* preparatory to landing. I manned my boats immediately, and with thirty men pulled up the river to *Gorgon*. Now they showered us with grape and canister, but not a man was struck. The French commandant said he could not join us in landing, as his boats were all destroyed, and he advised us not to do so, as the forts were still full of troops. In fact, we all thought that it would be madness to attempt it; but the boats being ready, we shoved off and pulled in towards the forts with three hearty cheers, under a shower of grape and round shot.

"We landed, and formed our men in companies on the beach. I was Captain Hotham's aide-de-camp. He immediately ordered me to take the third and fourth companies ahead as skirmishers; so I led the men up to the fort (which, I have not told you, is on a cliff about 30 (? 80) feet high, and a thick wood close behind it). When we got into the fort the enemy opened a sharp fire of musketry upon us, which we returned with interest. They retired into the wood. I was just going to give the word to advance when, two of our side being killed and two wounded, I made them retire behind the parapet, and from there we drove them well back into the wood. We then advanced and took possession of the wood, from which the enemy soon retired, leaving us masters of the whole position. I was then sent with the skirmishers to hold the wood while a party in the forts destroyed the guns, of which there were twenty-seven. They broke off the trunnions, spiked them, and burnt the carriages, and then pitched the guns over the cliff.

"It was then dark, and so, at about 8, we embarked.

"The next day (yesterday) we again landed and brought off ten splendid brass pieces, 32-pounders and 24-pounders, and all their ammunition, and everything else besides. I as usual had the skirmishers, and had a few brushes, but none of consequence.

"And now I have told you of the glory of the affair, we will turn to the other side of the picture—a melancholy contrast!

"The enemy, we judge, consisted of between 3000 and 4000 men. The loss, as you may imagine I feel, is that of my poor friend Brickdale, who was a lieutenant in *Comus*. His head was taken off by a 32-pounder at the commencement of the action. Poor, poor fellow! I am doomed to lose my friends! But how thankful I ought to be that I am myself spared, and how ungrateful that last expression is!

"The *Gorgon* and *Firebrand*, from their distance, escaped with a few shot in their hulls, and no killed or wounded. The *Comus* had 3 killed and wounded; *Philomel*, 7; *Dolphin*, 13, 5 killed. The *San Martin*, out of 100 men, had 35 killed or dangerously wounded, and 7 more slightly! with 110 *shot in her hull*, and both lower masts shot away. The other French vessels averaged about 7 each. The *Fanny*, only 1 wounded slightly—*your boy*. When the chain cable was shot away, it struck me in the ankle—quite trifling.

"I cannot say any more now concerning this affair. They all say it is the sharpest thing since the war. Everybody tells me I am sure of my promotion; but do not build on it, as I do not. But I think if anybody is made, I shall be, and they all expect a large promotion for it.

"Fancy! I am the junior lieutenant in the squadron!"

"*Fanny*, ESQUINA, PARANÀ,
"*Jan. 20th*, '46.

"Writing to you on notepaper! But it is better than not writing at all.

"After our affair at Obligado I was sent to Monte Video with despatches, and was then sent back to assist *Dolphin* to convey 70 merchant vessels up the Paranà to Paraguay; and pretty work we had with them, not only to protect them against gunboats, etc., but to heave them off the ground when they were on shore. And besides that, the enemy take every opportunity of annoying us with their field-pieces from the cliffs, when we can give them very little in return.

"On my birthday (January 18th) we had four hours' work with 8 field-pieces. They only succeeded in wounding 2 men, although they struck us often. I fired 51 shot at them, and, I may say, walked into a few of them!

"We are now at Esquina, about 100 miles above Santa Fé, and perhaps may proceed to Assumption (*vide* map). Imagine! 1400 miles up a river!

"I can assure you fighting is great fun; only, they fire a great deal too straight, and fight much too well to please us sometimes.

"Do not think, my dear mother, that my thoughts are on that alone. Death is brought too often before my eyes to prevent my thoughts being fixed on worldly objects only. But I find I require a warning friend constantly near me. Would that I could look on that One as *the* friend to whom alone I ought to cling."

"*Fanny*, ESQUINA, PARANÀ,
"*March 29th*, 1846.

"I have just quarter of an hour to write to you, and as I am running amidst shoals and dangers of every description, I have neither time nor attention to spare.

"We are still up the Paranà; plenty of amusement, plenty of fighting. They are now preparing heavy batteries to meet us on our way down. Much good may it do them, poor fellows! At Obligado we killed and wounded 1200 or 1400 of them, and now, I suppose, we shall have to do the same again.

"I cannot write you details of our proceedings up here. I must recount them *viva voce* at our tea-table at The Lawn; will that do as well? We have been up to Corrientes—1400 miles inland; on my return I had a long letter written to you, but when I arrived at Santa Fé the vessel had sailed, so I tore it up in disgust.

"The last news I had from England brought three mails at once, and such delightful letters! I also got one from Holland, as you know; one from Burrows, and two from other messmates. My thoughts now are full of one subject. I dare not mention it to you, but naval officers are ambitious creatures, and you can imagine what it is. *You* know by this time whether I shall be disappointed or not. . . .

"I am now, more especially, always dreaming of home, but I do not like to hold out any hopes. I trust you have sufficient confidence in me to know that, even if I voluntarily stay on the station, it will be for my own advantage in the service. At times I get completely home-sick, and think that no professional advancement can compensate for my spending the best of my years away from all I love."

"*Fanny*, ESQUINA, PARANÀ,
"Commenced *May 14th*, 1846.

"Your letter announcing the receipt of the private accounts of the Obligado affair I have just received, and the evident pleasure with which A—— and all of you heard the news has delighted me. I trust the official accounts will please you as well. You cannot imagine the effect of your letters on me.

"I think I told you by my last letter that we were waiting to escort a convoy of merchant vessels past some batteries that have lately been erected. Since that, I have been continually on the move up and down the river, and am now, I flatter myself, a pretty good pilot for the navigation of this intricate river. I commenced under the auspices and tuition of my friend Captain Sulivan (of the *Philomel*), one of the best surveyors and practical seamen in the service. He is lately gone home, and I have lost a valuable friend indeed—a man I have looked up to as a model for my future professional career. To our Paranà squadron his loss is irreparable.

"Since he left the river we have suffered a terrible misfortune. You will no doubt have seen the accounts in the papers, but I will tell you the true one, because although it could not be made worse than it really is, yet all sorts of exaggerated reports go home. You remember, we burnt all the vessels connecting the chain at Obligado with the exception of one, a very pretty little schooner. Captain Hotham fitted her out, and at the admiral's request gave her to Fegen, a lieutenant of *Philomel*, and assistant surveyor. This Mr. Fegen was ordered, about a month ago, to take despatches from Santa Fé to Monte Video, thereby involving the necessity of passing the batteries on the cliffs at San Lorenzo. This he was ordered to do at night, as the passage is easy, and under cover of the darkness he might pass without being perceived by the batteries.

"It appears that, at about 10 p.m., he grounded on a bank a mile above the batteries. He attempted during the night to heave her off; failed. Next morning the enemy, seeing his position, brought four guns down abreast of him and opened fire on him. The first four struck his hull, the last between wind and water. He then went into his boat with his men and shoved off, pulling up the river, leaving his vessel, gun, arms, ammunition, FLAG, mail-bags, etc., unburnt and entire, at the disposal of the enemy!! Not a man killed or wounded.

"Picture to yourself our horror on hearing of this. I make no remarks on the conduct of Mr. Fegen till a court-martial has decided that; but imagine: a flag—a British Union-Jack—and a gun taken from us, the Paranà squadron, by these scoundrels. What an indelible disgrace! Not indelible; I trust not. I hope yet to see it restored to us before we leave the Paranà, however dearly we may pay for its restoration.

"The *Lizard* steamer has arrived from England, and on steaming upwards to join us, when passing the batteries at San Lorenzo, had the misfortune to have four men killed and four wounded out of a crew of thirty-five; two of the killed were officers.

"But to change these melancholy subjects. How I long to see The Lawn and all the happy faces it contains, and walk with my father and a cigar on Saturday evenings. I have plenty of yarns stored up for these occasions. And Holland—how I long to see him; is he recovered? In A——'s last letter she tells me he has dislocated his knee-cap again, and was dangerously ill at Haslar. In this letter I hear of him 'rushing into a room' calling out 'good news.' I can't reconcile these counter-statements. . . .

"Most likely I shall have no opportunity of sending this letter till our arrival at Monte Video; I will therefore not close it till after the Rubicon, *i.e.* San Lorenzo, is passed; and should the Almighty be pleased to spare me on that day, I will give you an account of our proceedings there. . . .

"Do ask H—— to write to me. At present he has, I am sure, more spare time than I have. Tell him, if he will write I promise him a trip to sea in the first ship I command, without paying his mess—and I have a shrewd suspicion *that* is not very far distant.

"Captain Hotham's kindness to me is more than I can express. . . .

"How kind of Holland to take such interest in me! I suppose he has given up any idea of serving for the present. I expect to see his promotion in the papers daily. They must give it to him after the persevering zeal he has shown to be actively employed.

"We are now at Esquina with most of the ships of the combined squadrons. I am waiting for a fair wind to pilot them down to La Bajadà. We shall pass the cliffs of San Lorenzo about the 25th of this month (May).

"My friends Mr. and Mrs. Turner have taken a passage with Captain Sulivan; they are very nice people. All my friends are leaving this station, so I must leave it myself soon. You will imagine by my writing that I am very anxious to go home, and think of it continually. I grieve to say that is not the case. My thoughts, to my shame do I say it, are more continually on myself and our present occupation. My whole time, both of action and reflection, is engaged on this service, and I am far too selfish to sacrifice the various feelings of vanity and ambition to those which would be more worthy of me, namely, the softer feelings of benevolence and the domestic affections. These I trust, however, will return when the present exciting cause is removed. A few days at home will restore my mind to its proper tone.

"There are times, however, when I converse with men like Captain Sulivan, who can enter into my feelings and sympathise with me, that my thoughts are drawn more especially towards home, and peace, and retirement; and then I feel disgusted with this stirring, ever-changing life.

"They say that several large steamers are on their way to this station; among them the *Retribution* is named, commanded by Stephen Lushington, and Story is first-lieutenant. . . .

"*May 15th.*—I have to-day arrived at Santa Fé with the convoy, and you must imagine my feelings, for I cannot describe them, on receiving my commander's commission[1] and all your delightful letters. . . . Thanks to you all. . . .

"To-morrow, or the day after, we shall pass the cliffs at San Lorenzo; I shall write no more till then. I, as Captain Key, command the third division. Eh! Miss A——! I shall get my head on a 'bus yet!

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[1] His promotion was dated 18th November 1845.

"*May 31st.*—We have been anchored a little out of range of San Lorenzo for three days, waiting for a fair wind to pass them; but an obstinate southerly wind continues to blow. Awfully cold! Thermometer 36°.

"I may as well give you an idea of the guns, etc., in these formidable cliffs I have talked so much about—*vide* annexed elegant diagram.[1] We cannot get any true account of the number of guns. The cliffs are about 60 feet or so high, and the guns are drawn back from the edge so that we cannot count them. From A to B is about 3 miles, the breadth across about 800 yards. We are obliged to pass nearly within musket range, while we can hardly elevate our guns to hit them. To pass them we have to protect a convoy of 120 merchant vessels of all nations and of all sizes. Our plan is this: the steamers weigh first from our present anchorage; two of them anchor above the cliffs, say at about X; three steamers pass the forts and anchor below them, within shelling range, at about Y. In the meantime we, the sailing men-of-war, weigh with the convoy and push down past the batteries, shelling as we pass. In addition, in the night we land a brigade of rockets on the island (*a*). These rocket-tubes are masked till just before the convoy arrives. Then they open a shower of rockets on the forts. I think we shall walk into them, but they have a great advantage in pouring down such a volley of grape and musketry on our exposed decks. *Nous verrons!* They have, we believe, about 30 guns.

"You see by the above arrangement the sailing men-of-war will not be much exposed.

"The night before last I was on board the *Gorgon*, which is anchored 1½ mile from the cliffs, when, as we were smoking a cigar on deck, we heard a shot whiz close over our heads, and to our surprise we found that our friends on shore were amusing themselves by firing red-hot shot at us. They continued the game for two hours. It was pitch dark, so it was not a game at which two could play. We found, after they had fired about 40 shot, that there was no appearance of cessation, and, it being useless to expose the men's lives for a mere bravado, we therefore got the steam up and steamed out of range—red-hot shot are no joke!

"*June 11th.*—On the 4th June we passed the batteries with a fair wind; the arrangements exactly as I have before detailed. We escaped wonderfully, two men only wounded, and three merchant vessels driven on shore, which we burnt. Poor *Fanny* had more shot in her little hull than any vessel there, but not a man touched.

"I am sending this letter to Monte Video two days before my own arrival there, and I think, my dear mother, that even if I do not bring this home myself, you may expect me very soon after. May I find you all well and happy!"

"MONTE VIDEO,
"*July 28th*, 1846.

"I have a very bad headache, but I must write to you. It was, I suppose, by an oversight that your letter did not reach me by the last packet. You know, I suppose, that Sir Charles Hotham is appointed commodore on the coast of Africa; he immediately offered me the vacancy as commander of his ship. I jumped at the offer, of course, as it would be sure promotion in about three years. But, although the admiral and Sir Charles tried their utmost to get over the difficulty, they could not, as the Instructions say that no one can be appointed as commander under a commodore, who has not served three years first-lieutenant of a rated ship. I have not served a day, but the offer was made so handsomely, and the admiral appeared so interested, it pleased me much.

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[1] The diagram is not preserved.

"I feel now satisfied that I have thrown nothing in the way of my own advancement, and therefore I shall go home with additional pleasure, knowing at the same time that you and my father will be pleased at my not going to the coast of Africa. And, although I may not get my promotion so soon as I should have by going there, yet I am sure it will prove for the best.

"You may now, then, certainly expect me home in the *Gorgon*. She is ordered home immediately, and unconditionally, and will sail as soon as Sir Charles can exchange into *Devastation*, his future ship.

"Captain Crouch, of *Devastation*, will take us home, so on the receipt of this letter you had better not write any more.

"Oh! what happiness!"

After his return home Key wrote and published his work on the *Recovery of the* "*Gorgon*," already alluded to. In December 1846 he followed what was then the usual course in memorialising Lord Auckland, the First Lord of the Admiralty, for an early appointment. Admiral Henry Eden, then a Lord of the Admiralty, wrote by Lord Auckland's direction to inform the young commander that his name "would be entered on the list of officers who were desirous of employment, and who were well qualified for the command of steamers." Admiral Eden at the same time thanked Key for the present of his book—an act which natural motives of policy had no doubt dictated.

CHAPTER VIII

THE *BULLDOG*—1847

KEY did not long remain in idleness after his return to England. Officers were then appointed at their own request to study their profession, when otherwise unemployed, at the Royal Naval College at Portsmouth, as they now are at the Royal Naval College at Greenwich. Key was appointed to the College on the 18th of January 1847, and on the 3rd of May he got a sudden order to take command of the *Bulldog* at Devonport.

The remarkable position which Key had now attained in the navy is shown in nothing more strongly than in this appointment to the *Bulldog*, even though it was generally understood that the men at the College were in a good place for sudden appointments. She was a new ship, a particularly fine and handsome paddle-wheel steamer. Her sister vessel, the *Gladiator*, was made a captain's command. Key had only been some six months at home, and was only of seventeen months' standing as a commander, and yet he was selected for what was, in some sort, a special command.

It was not only that he was distinguished as a naval officer for conduct in action; that might have given him the early command of a smart sailing sloop. But these were the days when the navy was divided into two parts—the sailing and the steam navy; and the majority did not see what was coming, and sought for distinction on the old lines. At the Admiralty, "scientific" men were looked for to command the steamers, and, however unwilling individuals at the Board might be to admit that the best men should go to swell the ranks of the approaching steam demon's hordes, the Board as a whole looked the facts in the face. In Key it had a young officer who had deliberately cut himself off from the old lines of the sailing navy, and had not only shown, in the recovery of the *Gorgon*, that mechanical capacity which it was thought should distinguish the steam officer, but had, by force of circumstances, been placed in the position of having to take a sailing vessel into action, which he had done with infinite credit to himself.

It followed, almost of course, that he should, as early as possible, be given the command of some specimen steamer where he could show how to develop the steam navy.

The *Bulldog* was near about the size of the *Gorgon*. She was 1124 tons; that would be 1555 tons displacement according to present reckoning. She was nominally of 500 horse-power, which would be perhaps 1900 as at present reckoned. Nominally she was what was then a fast ship, her speed being 10.2 knots, but in reality she could keep up 11 knots for some continuance; and, what was then looked upon of immense importance, she could sail well. She only dated from 1845, and she carried the usual six guns. She was regarded as economical in fuel expenditure. These qualities peculiarly fitted her for the services she was destined to carry out, and made her, as it were, a very perfect ship with a very perfect commander.

Key joined his ship at Devonport immediately after his appointment. She had already served part of a commission; she was very disorganised, ill-manned, and hurriedly prepared for sea, but she was required to proceed at once with despatches for Lisbon. Key's sensations on surveying, under pressure of time, his new position, are given in words written on the 5th of May 1847—

> "Little did I think what an awful responsibility I was taking on myself till I found myself left alone on board *Bulldog*. She is in a dreadfully disorganised state; I daresay it will be for my good,—I hope it may. I never felt so weak, or so conscious of my own insufficiency.
>
> "I shall have plenty of work. She is a truly noble ship."

The despatches to be carried related to disturbances in Portugal. The rebellion of Count Sa da Bandiera against the Queen of Portugal was in full swing, and Lord Palmerston, at the Foreign Office, was keenly watching its development, ready and willing to strike it down when it had come to a head. Admiral Sir William Parker was in the Tagus with a considerable force, and Oporto, the headquarters of the main body of insurgents, was watched by British ships.

This outbreak in Portugal was a sort of overture to the great series of insurrections and revolutions which characterised the years from 1847 to 1850. The match may be said to have been applied by Pope Pius IX., whose liberalism was of that unballasted and sentimental character which is called amiability in private life, but generally signifies bloodshed and misery when it governs the public acts of a ruler or a statesman. Great stretches of the shores of the Mediterranean became charged with political electricity at high tension, and most of the inhabitants of the Italian States took to indiscriminate shooting, incited by the waving of tri-coloured flags and the refrain—

Viva Pio Nono
E basso Metternich!

The subject of our Memoir was destined to be in the very thick of it all, and practically to be trusted as highly as, if not more highly than, any naval officer under the commander-in-chief, Vice-Admiral Sir William Parker. The peculiar qualities of the ship he commanded, her mobility, her offensive powers, and her small draught of water (15 ft. 4 in.), singled her out for services that only her sister vessel the *Gladiator* could have as well performed. But it is plain upon the record that the character of her commander was entirely in consonance with the character of the ship, and personal and material considerations combined to place Commander Key as the most active and prominent agent in a set of circumstances altogether unique in naval life.

A general survey of that part of Key's life which is embraced in his command of the *Bulldog* shows us first that new experiences developed new qualities and tastes which were latent and entirely unsuspected by himself. Otherwise, we may say we observe that the character we have noted in its growth is here matured.

In his private letters from the *Bulldog* we lose most of the traces of that process of self-education which is perhaps the leading feature traceable in those of the preceding years. Introspection becomes rare; the appearance of new feelings, new tastes, or new determinations are noted and accepted as they arise, but with less analysis of their sources. Public life and public questions of European if not of more widely spread importance, press firmly, but in no case distressingly, on the young naval officer, who had made his character for mechanical instinct, for personal dash and daring, and for zeal. He was now to show how, in the words of his commander-in-chief, he was "prudent,"[1] able to "acquit himself very judiciously,"[2] acting so that he could "very much approve of all his proceedings,"[3] acting "with great judgment,"[4] and being "of the greatest service,"[5] and in every case, where the diplomatist and the statesman were to show out as something apart from the whole of his apparent training as a naval officer.

In this active life Key's interest in *matériel* naturally wanes. It was there all the same, and we occasionally come across its traces. But steam, ordnance, and the other material objects and developments which have hitherto been his study, have been now, it is seen, sufficiently mastered for the practical purposes of his naval life. Possibilities in the future of these things are not greatly the subject of his speculations. If the times had been quieter they would have been. But the present outweighed the interest of the future, and the protection of British life, property, and welfare were almost all in all to the young commander.

But, in the general turmoil, war on a great scale was anticipated, and the naval mind was fully made up as to how steam and sail were to combine for the purpose of the general action at sea. Lord Auckland, the First Lord of the Admiralty from 1846 to 1849, thus threw the general view into shape.

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[1] *Life of Sir William Parker*, by Vice-Admiral Sir A. Phillimore, iii. 431.

[2] *Ibid.* p. 375.

[3] *Ibid.* p. 300.

[4] *Ibid.* p. 298.

[5] *Ibid.* p. 297.

"You know how favourite a notion it is with *me* that every strong ship should have her attendant steamer, and I think that your squadron may consist of—

Hibernia . .	*Terrible*,	800 h.p.	*Canopus* . .	*Dragon*,	560 h.p.
Trafalgar. .	*Retribution*,	800 ,,	*Superb*. . .	*Centaur*,	540 ,,
Rodney. . .	*Sidon*,	560 ,,	*America* . .	*Gladiator*,	430 ,,
Albion . . .	*Avenger*,	650 ,,	*Thetis*. . .	*Scourge*,	420 ,,

"I attach infinite importance to the combined movement of steamers and sailing vessels, not only for mutual support, but also in the economy of means by the management of fuel.

"We must have some strength at Lisbon, and I propose to send there at the end of April the *Queen* or *St. Vincent*, with one or two steamers.

"There may be altogether in the channel—

St. Vincent	*Bulldog*.	*Vengeance*	*Stromboli*.
Howe	*Sphynx*.		
Britannia	*Gorgon*.	2nd Rates.	
Caledonia	*Geyser*.	*Blenheim* and *Amphion*."[1]	

The settled views of the navy as thus put forward postponed most of the material questions with which Key was afterwards to be so closely identified, and facilitated, as it were, the efforts by which he threw himself wholly into all that was immediately before him as commander of the *Bulldog*.

Hints have been given, in previous passages, of Key's susceptibility to the influence of the passion of love. He was, it has been said, "the most susceptible of men." Not, however, that there was inconstancy in his nature; quite the other way. But it was with him, as with others of warm temperament, the course of true love did not always run smooth; and while the public life, during the later days of the Mediterranean service, was full of activity and vigour, the private life was teeming with a sorrow which was not to be removed for years.

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[1] Lord Auckland to Sir William Parker, 22nd March 1847 (*Life of Sir William Parker*, iii. 158). How the old and the new were mixed up in these lists, and how the future was foreshadowed slightingly at the end, is worthy of notice. All the ships in the left-hand column were sailing ships, and all but *America* and *Thetis* were line-of-battle ships of the old war pattern. The *Canopus* was the *Franklin*, one of Nelson's captures from the French at the battle of the Nile. The *Hibernia* (I recollect it well) retained the spritsail-yard, which was a new invention a hundred years before, and carried "flying" royals. The *America* and *Thetis* were sailing frigates, and the first-lieutenant of the latter ship was the reputed "seaman" *par excellence* of the place and time. A man of great energy and gallantry, Boyd wrote afterwards *The Naval Cadet's Manual*, in the pages of which the seamanship of the day may be studied, and which was for years the young officer's text-book. The author perished as a captain in a gallant and daring attempt to save life from shipwreck at Kingstown, in Ireland. The last names upon the list—the *Blenheim* and *Amphion*—were pioneers. The first was a cut-down line-of-battle ship; the second a new frigate, to be closely drawn into the story I am telling; and both were being fitted as *screw steamers*.

Those who look closely into the life of Nelson may observe how, from first to last, his tender and affectionate nature was driven to fix itself on something reciprocal in some one woman, and to anchor there. Key was made of the same sort of stuff in that way. The passion of love was able to master his private life for years at a time, though possibly it never showed through or even touched his public acts. In these, his whole Mediterranean service was a triumphant march from success to success, until the saying on board the *Hibernia*—Sir William Parker's flagship—was verified: that he was born, "not with a silver spoon, but with a whole dessert service, in his mouth."

Whatever Key might have felt within himself on taking command, we may be very certain that no one in the service, outside himself, had any inkling of such a thing. His despatches arrived the same day, and he quitted Plymouth Sound and made at full speed for Lisbon. He ran at once into a strong south-westerly gale, which cost him his jib-boom, jib, and gear, and a great part of the forecastle hammock nettings.

He was a cautious navigator, and would not run risks even when bearing immediate despatches. The deep-sea lead was in use on approaching Finisterre in the dark, and, as the weather was thick, soundings in seventy fathoms caused him to turn his head off shore, and to go slow till daylight. But he anchored in the Tagus at 4 p.m. on the 10th of May—a five days and three hours' passage, which was at this date remarkable speed in foul weather. In Key's language, it was "a splendid passage."

Key had come away without personal supplies of any kind. There had not been time to furnish his cabin, and in those days Government did not take any account of the difficulties and inconveniences which surrounded an officer so placed. Nowadays, a commander situated as Key was would have found nearly everything ready to his hand except food and wine. Under the circumstances, Key was not sorry to find himself steaming full speed back again to Portsmouth on the 18th of May—

> "I am quite delighted with the ship," he writes. "She is a magnificent steamer, and I trust will shortly prove an efficient man-of-war. I like all the officers. . . . But everything smiles at present.
>
> "It is hard work, and anxious, being captain in a gale of wind, more especially just entering the —— (May 19th), while I was writing last night, a light was reported right ahead. We, by our reckoning, being eighty miles from any land, but from the hazy weather we had had we had not had an observation for two days. I immediately hauled right off at a slow speed, and soon came to the conclusion that it was the light on the Penmarcks rocks, south of Brest, and I shaped a cautious course for the night accordingly.
>
> "It was a very near chance for us. We were within five miles of the rocks, going 11 knots. We had just had soundings, and the master and myself this morning, on looking back, have nothing to blame ourselves with; not a single precaution omitted. Of course, carrying despatches, I am obliged to go full speed.
>
> "We shall anchor at Spithead to-morrow morning (20th)—a passage of four and a half days, though I touched at Oporto, and lost all last night."

The despatches spoken of by Key were of really great importance, as they showed the wide spread of the insurrection in Portugal, and shadowed forth the necessity for interference by independent Powers if anarchy was to be avoided. The day that Key arrived at Portsmouth, Sir Hamilton Seymour, our minister-plenipotentiary at Lisbon, and Sir William Parker, took personally on themselves to interfere, and to demand an armistice from the insurgents.

Time pressed, and Key was to be hurried back to Lisbon with Lord Palmerston's instructions to the minister—

> "I am full of business," Key writes, "as usual. You know, I daresay, that I am ordered off again to Lisbon. Sharp work; but I am doing my best to get my ship ready, and have scarcely time to think of myself. Burrows gave me a delightful account of his visit; the happiest days he ever spent. . . .
>
> "This is dreadfully hurried work, but Lord Palmerston is very anxious, so I must do my best."

The *Bulldog* received her despatches and a Queen's Messenger on Sunday, 23rd May, and immediately proceeded to sea. Key writes in the Bay of Biscay:—

> "I was hurried away from Portsmouth without time to say a word, and I have not much more now. . . .

"We have some chance, I believe, of a brush with the insurgents at Oporto. What a splendid thing for us! I wish I had a little more time to get the *Bulldog* into the state I should wish to see her in. But she is improving. The men are willing, though not very bright.

"How kind Captain Hamilton[1] has been to me! On arriving in England I merely expressed a wish for having some alterations made in *Bulldog*, and down came an order to the admiral at Portsmouth to make any alterations I wanted. . . .

"Everybody agrees that she [his ship] is the handsomest steamer they have seen. (The wretch! she is rolling about so now that I can hardly write.) . . .

"Charley Napier is coming out to Lisbon as commander-in-chief. He is the man to take Oporto. He will find a *casus belli* if he can."[2]

Arriving at Lisbon on 27th May, Key was ordered at once to prepare for sea again. He writes—

"*May 28th.*—'There is no peace this side of the grave!' We anchored last night in Lisbon, and are off *somewhere* to-day. Here we are, coaling, provisioning, and watering in a dreadful hurry!"

The "somewhere" was immediately disclosed, and promised that "brush" which Key had hoped might be "splendid." The *Bulldog* was ordered to make the best of her way to Oporto; and Key was informed that "Her Majesty's Government, in conjunction with those of France, Spain, and Portugal, had determined on active intervention for the purpose of terminating the civil war in this country, and it became an object of much importance that the steam and all other vessels in the service of the provisional junta should be seized wherever they might be met with, to be delivered over to the Queen's Government."

As a consequence, Key was ordered to "look along the coast for the *Mindello*, an armed steam vessel in the hands of the insurgents, which might perhaps be found near Peniche." If he fell in with this or any other insurgent vessel he was to seize them accordingly and bring them to Lisbon, taking care not to use force until mild persuasion had been tried in vain, and even then he was to fire *wide* and *over* before guns were pointed directly *at* them, to avoid, if possible, the shedding of blood. But as it was yet doubtful whether the *Gladiator* and a Spanish brig of war, *Sobrano*, had cleared the bar of the Douro, it was advisable that Key should not commit any hostile act within sight of Oporto—which was in the hands of the insurgents—that might compromise the safety of these vessels. In such a case he was to keep company with the insurgent vessels, and not attempt to seize them until they were at a desirable distance from Oporto. It was of importance that the insurgents should not be permitted to land troops from vessels of any description on the coast of Portugal.

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[1] Captain W. A. B. Hamilton, Permanent Secretary to the Admiralty.

[2] Sir C. Napier never, I believe, bore the reputation amongst his naval contemporaries that he bore—previous to the Crimean War—with the public and the junior officers of the navy. Lord Auckland thought Sir Wm. Parker would be "startled" by the appointment, and the latter was very distinctly begging that he might not be called on to meet him.

If nothing interfered with his reaching Oporto, Key was directed to place himself under the orders of Captain Sir Thomas Maitland, who commanded the *America* frigate as senior officer off the Douro.[1]

In accordance with these orders, Key reconnoitred the coast of Portugal to the northward, but discovered nothing of consequence, and at 3 a.m. on 30th May he hove to, and communicated with Sir Thomas Maitland.[2]

I have a very vivid recollection of that morning. I was then a naval cadet in the *Sidon*, and our ship had weighed about the time of the *Bulldog's* arrival. We had had notice of the probable attempt of the insurgent squadron, commanded by a man named Salter, whom we understood to be an American, and carrying about 4000 troops under Count Das Antas, to put to sea for an attack upon Lisbon. The *Gladiator* and the Spanish vessel were still inside the bar, but it was hoped that the exceptional height of the tide might permit of their escape. The card the insurgents were supposed to be playing was their power of retaliation by the batteries of Oporto upon these two ships, if the insurgent squadron was interfered with at sea.

I recollect the fresh morning air, the breaking daylight showing the Portuguese vessels in motion, and the anxiety which the least of us felt as our ships steamed slowly up to take final orders from Captain Maitland, which he shouted from the stern of his ship. Whether my memory here betrays me or not I cannot be sure, but it tells me that the language of Sir Thomas was strong, and decreed the wholesale destruction of the Portuguese squadron.

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[1] Sir Wm. Parker to Commander Key, 29th May 1847.

[2] Afterwards Admiral the Earl of Lauderdale.

Presently, in the dim dawn, the *Gladiator* was seen to pass out safely over the bar, and then it seems the insurgents made some demonstration of return into port, which was frustrated by the manœuvres of *Sidon*, *Gladiator*, and *Bulldog*. The Portuguese insurgents had three armed steamers, with a barque, brig, two schooners, and transports.

We in the *Sidon*, and those in our other ships, were at "general quarters," and as day broke, the British steamers each singled out a rebel and summoned her to surrender. I recollect how we lay, rolling a little, close alongside the *Mindello* crowded up with troops, and how we looked down the muzzles of her guns as they looked down ours, and considered what a terrible smash there would be if the rebel colours did not come down in the few minutes allowed by Captain Henderson, who stood on the paddle-box, watch in hand.

But resistance by the rebels would have been worse than absurd. A few minutes before the time allotted was up, we saw the colours slowly descend, and at the same time Salter hailed from the paddle-box of the *Mindello* to announce surrender, but to say, in language somewhat brusque, that if it had rested with him, things would have been different.

In the meantime Key, in the *Bulldog*, had been taking possession of the *Oporto*, while the *Gladiator* had captured the third steamer. The other ships were likewise handed over to the English; and, after putting prize crews on board them, and relieving their overcrowded state by transferring considerable numbers of the troops to our own ships, we took the sailing vessels in tow and proceeded to Lisbon with the whole insurgent expedition as our prize.

The greater part of the prisoners were afterwards transferred to Fort St. Julian, at the mouth of the Tagus, and were guarded there by the *Superb* (Captain A. L. Corry), *Sidon*, and *Bulldog*. Afterwards terms were made with the Portuguese Government for "these vexatious prisoners," who were "harassing" Sir Wm. Parker "out of his life," and they were dispersed. Key had already received, through Sir Thomas Maitland, Sir Wm. Parker's "highest approbation of his conduct on the occasion of the capture of the insurgent forces and subsequent escort of them to the Tagus."

The town and harbour of Setubal, or St. Ubes, a little to the south of the Tagus, were at this time in the hands of the insurgents under Count Sa da Bandiera, and it was determined to demand their surrender. On 14th June Sir Wm. Parker hoisted his flag on board the *Sidon*, and with six English men-of-war (including the *Bulldog*), two Spanish and one French, proceeded to the port and anchored in line of battle off the town. The insurgents formally surrendered, but most of them broke their word and escaped into the country; 475 were taken on board the ships and, with Sa da Bandiera, were conveyed to Lisbon.

It was under these circumstances that I first came to know Commander Key and his ship the *Bulldog*. I very well recollect the peculiar air of brightness that he carried with him, and how we midshipmen recognised him as something above the ordinary commanders of ships, and the *Bulldog* as something different from the ordinary steam sloops. We understood her to be in what was called "beautiful order," and there was a look of grace about her which is in some way now mixed up in my mind with the look of grace which it was Key's fortune to carry about in himself. I recollect also how we understood that Key and the *Bulldog* were always expected to take distinguished places.

As affairs in Portugal grew settled, Key was hoping that he might be ordered home again. And this not alone from his affectionate desires towards his family, but from the more prosaic fact that he had been all this time living from hand to mouth in his own cabin, which was not fitted or furnished, and was without any of the conveniences of life on board ship. This was on account of the hurry which had been pressing upon him from the moment he set foot on board his ship. "I am not," he said, "exactly on Lord Collingwood's 'tin-pot and spoon,' yet I am very hard-up. I have borrowed paper and envelopes from every captain in the squadron, till I am ashamed to look them in the face."

The inner life of his ship is occasionally indicated in his letters of this time, as when, speaking of a proposed visit of a friend (a clergyman) and his wife on board his ship, he writes—

> "In earnest, I should be delighted to have them with me for the passage out. B—— would do duty on Sunday and assist me with my school as I hear the ship's boys read the lessons and psalms in my cabin, and I am soon going to catechise them. The alteration in church is quite delightful. The way all the ship's company repeat the responses is so cheering. You can, I daresay, imagine the effect it has on me while reading the service."

But he had his doubts about getting home. "Sir William Parker," he says, "finds the *Bulldog* useful. I fear he will not part with her. What a fortunate fellow I am!"

After the destruction of the insurgent hopes, *Bulldog* was sent to lie off the bar of Oporto to prevent ingress of vessels in the service of the insurgents, and she was there for some weeks. Lying there he writes:—

> "I am leading a strange, artificial life, but it is very beneficial, I feel. For the last three weeks or a month I have been alone; that is, in our little world, the world of which I am the absolute monarch, shut out from your great Babylon. No one present to control me except God and my conscience. Apparently no employment, yet not a moment unemployed in thought; in guarding carefully my words, my manner, my very expression of countenance. And this, though artificial, is good for me. It gives me great command over my passions; it is continued self-denial. You would not know me now. I often think how very *à propos* my disposition is to my situation in life. Had I lived on shore, exposed to the temptations of society (unless withheld by my one dreadful blight[1]), I should have been a thoughtless nobody, but now I trust some future day I shall soar above the common herd.
>
> "All the occupation and anxiety I have about my ship leave me but little time to think of home and all the dear ones it contains, but every evening *some* time is devoted to you when I am alone. . . .
>
> "How constant I am to my bride (my ship)! We have been lying off this place nearly a month, and I have been to the town but once. I have an invitation to a ball on the 19th, but my wife won't let me dance!"

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[1] That is his stammering, which, however, was not at this time so serious as he made it out.

On the 17th July, Key writes that,

"A vessel has just arrived from Lisbon and brought me . . . orders to proceed to Lisbon to join the admiral, and then I am told, privately, we shall go up the Mediterranean; but I will tell you more by the next vessel that goes to England. . . .

"It will be very annoying if we go to the Mediterranean without going to England, but I must make the best of it. Will you tell Smith & Elder to send six copies of that 'valuable and entertaining work'[1] to Gillott for me. Here I am without one.

"Have you the fourth volume of Nelson? What a noble fellow he was! What a pity that my favourites, Nelson and Byron, should be so unpopular.[2] The latter, I fancy, is my favourite from a spirit of contradiction. People have underrated him (his private character), and I overrate him—perhaps. . . . We sail for Lisbon to-morrow morning at daylight."

Then from Lisbon, eight or ten days later—

"I am *bonâ fide* off for the Mediterranean. Is it not delightful? The command of a steamer, and such a steamer! in the Mediterranean. I shall sail in one or two days for Gibraltar, where I shall complete provisions and coals, then go to Malta. There I await the arrival of the admiral. Now, this is delightful as far as it concerns the ship, but not quite so as concerns myself. I am all adrift! No nothing! Never mind, we must see what can be done. . . . How glad I am . . . that we did not know I should not return when I took leave at The Lawn. It is better as it is. I look back on that half-hour with pleasure, as it is; had it been otherwise I should not.

"The mere fact of serving under Sir Wm. Parker is in itself an honour. The first living admiral! He is very kind. He has a very nice family at Malta, I can tell you—four very pretty daughters.

"*Monday, July 20th.*—The *Jackal* has just come in. Her engines are all adrift, and I am to put her to rights with *Bulldog's* engineers. This, I fear, will detain us some days."

The *Bulldog* finally sailed from Lisbon for Malta on 29th July, and at Gibraltar it was her fortune to come again into favourable notice—

"*Gibraltar, August 3rd.*—I have been delayed at Gibraltar [writes her commander] one day longer than I expected, by a Spanish steamer which foolishly ran herself on shore on Europa Point. I got her off after a few hours' work. She came off very prettily; nearly all the garrison turned out to see it, and the governor, Sir Robert Wilson, has been very kind, and behaved very handsomely about it."

By the 10th of August the *Bulldog* was at Malta, where she lay a month re-fitting, and then on 7th September she sailed on the first of many protective and diplomatic expeditions, which were to establish Key's character for judgment, prudence, and decision, in a way and to an extent which surely have fallen to few other officers of his standing. But it cannot be forgotten that the whole of the success which attended Commander Key's actions in the *Bulldog* were the direct result of the decision come to in the *Curaçoa*, to abandon present comfort for the chance of future distinction.

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[1] *The Recovery of the Gorgon.*

[2] This is a very remarkable statement as to Nelson; and yet in days when there was no comprehension at all of our naval position, and what we owed to it, it may have been true.

The Mediterranean Fleet was now under command of Rear-Admiral Sir Lucius Curtis, but Sir William Parker was on his way from the Tagus, little foreseeing the turmoil and anxiety which was before him on his return to his proper command.

The prelude was played at Messina on the 1st September, and on the 2nd the leading British merchants of the place wrote as follows to Mr. W. W. Barker, the British Consul—

> "SIR,—We, the undersigned British merchants and residents in Messina, taking into consideration the disturbance which took place yesterday evening at 6 o'clock between the populace and the military, and the present unsettled state of the city, beg you to represent the case to H.B.M. Minister at Naples, and to the admiral commanding the Mediterranean fleet at Malta, soliciting the presence of a vessel of war in the port of Messina, as we consider our property and lives may be placed in peril on the continuance of such disturbances."

The Consul forwarded the request to the Hon. William Temple (afterwards Sir William), our Minister at Naples, observing that the disturbance which took place cost a great number of lives to both parties, and that a gendarme was shot to death under his windows by the revolters. Lord Napier, as Chargé d'Affaires, who had taken Mr. Temple's place at Naples, sent the papers to Sir Lucius Curtis for his favourable consideration—

> "Considering the present state of political excitement in the Sicilian ports, the appearance of the British flag might not be without utility, especially at Messina, from whence complaints have more than once reached Her Majesty's Legation of the disorderly conduct of the populace."

Sir Lucius Curtis selected the *Bulldog* for this duty, and Key sailed from Malta on 7th of September, under orders to proceed to Messina for the purpose of obtaining from the Consul every information relating to the disturbances reported, and such other information as he might be able to obtain relating to the existing political excitement. Having completed this service with the least possible delay, he was to return forthwith to Malta and make a full report of the result.

The *Bulldog* arrived at Messina on the 8th, and anchoring for two hours only, was back at Malta on the 9th, and Key made the following report next day—

"1. I have the honour to inform you that, in pursuance of your orders, I left Valetta harbour in H.M. steam sloop under my command on September 7th at 5.30 p.m. for Messina, at which place we anchored on the following day at 1 p.m.

"Placing myself in communication with Mr. Barker, H.M. Consul, and one or two of the principal merchants, I learnt the following particulars:—

"2. The disturbance that took place on the 1st September was unexpected, but not unpremeditated. It appears that the insurgents, who muster in considerable force in Calabria, had succeeded in gaining over a small party in Messina, and had agreed to co-operate with that party if they would rise at a certain time on the 1st September. This they accordingly did, by signal of a gun, but by some misunderstanding they were not joined by the Calabrians; their number therefore did not exceed 50. They were immediately routed by the troops, who killed about 10, but took no prisoners, having 4 or 5 of their own number killed. In a few hours all was quiet; people naturally kept within doors for a day or two, but without any apprehension of a second outbreak. The British Consul and merchants were alarmed at the time, from the sudden nature of the disturbance, and, as many parts of the kingdom are in a state of partial revolt, they were fearful lest this was the forerunner of a revolution. Their alarm soon subsided, and has now changed to a feeling of perfect security.[1]

"3. The Government has doubled the number of troops in the town and suburbs; there are now nearly 3000. Thirteen individuals have been arrested, chiefly priests, the others are people of no note; it is generally supposed that they are not connected with the insurrection.

"4. Among the insurgents on the 1st September were two young Englishmen named John and Charles Pierce, aged 20 and 15 years. Some say that they were forced to join at the risk of their lives, having arms put into their hands; others, that they had been seduced by some priests (which I believe). However, they were seen to be with the insurgent party, and, having escaped, they are now concealed. I was requested to give them a passage to Malta if they could smuggle themselves on board; but as their lives were not in danger, and I considered that I should be assisting them to evade the laws, I refused to consent, but, on their requesting it, told them that I would represent their case to you.

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[1] Nevertheless it *was* the beginning of a revolution during which Messina, all but the fort, passed into the hands of the rebels.

"5. With reference to that part of the kingdom in general, I was informed that discontent and disorganised revolts are frequently occurring in many parts. On the 1st September the insurgents gained possession of the town of Reggio in Calabria (nearly opposite Messina), and hoisted their colours, a tri-colour, and their emblem, a cross. On the 3rd September three Neapolitan steamers of war proceeded off the town, and, after summoning them to surrender, fired on the fort; the insurgents returning one or two shots, and then, opening the prison and releasing about 500 prisoners, fled into the country and encamped on a hill called Santa Stefano, where they are now, in number about 2500.

"6. The cause of the discontent appears to be the heavy taxes, especially the land-tax, which it is said is very unpopular. The priests take advantage of every opportunity to increase the ill-feeling towards the King of Naples and his Government, and have succeeded in many places in rendering the mild constitutional Government of the present Pope very popular, and much wished for by the lower classes.

"7. The British merchants seem to consider that there is now nothing to fear; the revolters, of whom there are very few in Messina, have no recognised head. The disturbance on the 1st September was the only one that has occurred for years, and the English are much liked by all classes. The appearance of the *Bulldog* so soon after their application has given them great confidence, and H.M. Consul is very grateful for your promise of sending a vessel of war to visit them occasionally when you have one at your disposal.

"8. Having obtained the above information, I left Messina at 4 p.m. on September 8th for Malta, where I arrived at 8.30 a.m. on September 9th."

I have given this letter in full, as illustrating the solidity which appears in this first official despatch of importance from Commander Key's pen. Recollecting his age—only 26½—and his standing as a commander, one is easily struck by the breadth and clearness of the views expressed, when we know that they were gathered in the space of a couple of hours' conversation. There is also the decision come to about the two young Englishmen, so judicious and distinct. It is singular that though Sir Lucius Curtis and Sir William Parker both approved of Key's action in this matter, Lord Palmerston disapproved of it later.

In his private letters Key is brief—

"I was suddenly ordered away to Messina the other day, as they had an insurrection there. I went; inquired into it; frightened them a little; and returned to Malta in a day and a half."

And then three months later, when his report had been through the Foreign Office, and Lord Palmerston's opinion had been expressed:—

"I have just received a reprimand from Lord Palmerston about an insurrection at Messina that I was sent to inquire into. My proceedings were approved of by Sir William Parker in writing, immediately after I returned. And now, even in the face of Lord Palmerston's letter, the admiral says I acted perfectly right, and hopes I will act in the same way again if I am similarly situated. So much for my Lord P."

The following letter is notable for another reason, as disclosing the blindness of political mankind, and its inability to read the signs of the times. Key reported the general view when he assumed that no further disturbances were to be apprehended. In a private letter Key seems to show more insight as a looker-on than those who were more closely mixed up with affairs. His experience in Portugal had perhaps opened his mind and enabled him to detect one at least of the operating causes—

"The scenery in the Pharos of Messina is magnificent. The country people are much inclined to revolt. Their king is not popular out of Naples. The Pope is, I imagine, endeavouring, through the priests, to create a feeling in his favour, and is succeeding. *His* Government is popular everywhere in Italy."

By the middle of September the *Bulldog* was in all respects, except as to his own cabins, as her commander wished her to be—

"I wish you could see the *Bulldog* now," he writes; "I *may* say she is the admiration of everybody. French and English all say she is the most beautiful vessel that ever was seen. . . .

"The admiral and his squadron returned here the day I returned from Messina, and are now re-fitting preparatory to a cruise. *Bulldog* accompanies him. Malta at present, therefore, is dreadfully gay; nothing but dinners and tea-fights (as they are called),—at all of which I am, of course, obliged to attend. A dangerous place is Malta, I can tell you, for a young commander. The winter season is, I hear, something tremendous; parties every night without any interruption. . . . Oh dear! those horrid balls will ruin me! I was dancing till past three this morning, and have been drilling the *Bulldogs* at their guns for two hours (9 a.m.)—my head is all adrift. . . . Pray for me. I fear my head is turned at times by prosperity."

His destination was, however, not to be for the present that which he anticipated. A time of great delight was mmediately before him, and his mind was about to be awakened to joys and marvels which had not yet been thought of in his philosophy. A whole series of new consciousnesses were on the eve of breaking forth, and tastes were to spring up that he had no conception of when on the 4th of October he found himself steaming for Genoa, in obedience to orders—

"I am now clear of the whirl of Malta, and will therefore endeavour to give you a sober letter. I am on my way up to Genoa, ordered there to convey the Earl of Minto whither he will; the said Earl being ordered on a special mission to the King of Sardinia and the Duke of Tuscany. It is probable, therefore, that from Genoa I shall take him to Leghorn and see Pisa and Florence; then to Civita Vecchia, and see Rome. There is a pleasant trip chalked out!

"With one drawback, however, which is this: the day I sailed from Malta (October 2nd), the captain of an English brig that was undergoing quarantine from Alexandria, from ignorance, as I believe, came on shore, thereby putting the whole island in quarantine until October 15th. I shall arrive at Genoa on the 6th, and shall have to endure nine days' quarantine. In the meantime, if Lord Minto is ready to leave Genoa, he may go by land to Florence, and I shall follow to Leghorn.

"You cannot imagine what pleasure it is to serve under Sir William Parker. He is so kind and considerate; so devoted to the service; and though so strict, yet he carefully distinguishes between errors from inexperience and those from carelessness. . . .

"I have just finished Arnold's life. What a glorious example of a man keeping the one object before him—steadily all his life!

"*October 5th.*—It is now blowing a gale; we shall be at Genoa early to-morrow morning; Genoa the superb!

"I must own that I have not that ardent longing to see Italy which is so general. But, now that I am on the eve of visiting it, my anxiety is greater. Venice and Pisa, I know not why, are the two places I am most anxious to visit, even more than Rome or Naples. How dear A—— would enjoy this trip.

"*October 14th.*—Not yet out of quarantine, yet I have enjoyed my fortnight's solitude. We shall be released on Sunday, and on Wednesday, Lord Minto, two sons (one of whom I know), and four daughters, come on board. They first go to Leghorn. My cabin will be pretty full. It is rather a pity my things are not yet come; plate, etc., will be in request. They must be at Malta by this time, I fancy, as I see by the papers that the *Antelope* had left some time.

"*October 15th.*—It is Lady Minto and three daughters, I find, that are coming. I did not know the former was in being."

Key was ordered to furnish the admiral with "any information that he might be able to collect relative to the state of public affairs and passing events at the places he might visit." Sir William Parker, in writing to Lord Minto, said—

"I have selected the *Bulldog* to attend you, in the belief that you will find her not only a very swift and clever steamer, but every disposition in Commander Key to meet your wishes. He is a very intelligent and amiable young officer, and I believe has had the gratifying reward of promotion for his merits and scientific acquirements, which he bears with very becoming diffidence, displaying only a most praiseworthy zeal for his profession."

The specially fine character of Key's ship is indicated by his power of accommodating so large a number of persons in his cabins. Hardly any other "sloop" in the service could have done the like; and, generally speaking, the accommodation of officers in command has been considered of much less importance in late years than it was in Key's time.

His views on what was to be seen in Italy underwent a most marvellous change when he came face to face with the glories of her art. Writing from Malta after the cruise was over, about 4th November, he says—

"I have just concluded such a delightful week. A few days after my last letter Lord Minto arrived at Genoa, remained there three days, during which time I lived with him; then embarked with Lady Minto, two sons, and three daughters. I took them to the Gulf of La Spezzia, then to Leghorn. On our arrival there they asked me to go to Florence with them. I went, and remained eight days at Pisa and Florence. They are such a delightful family. I have never met anyone more kind and warm-hearted. Then the places we visited together made us more intimate.

"The magnificent palaces, churches, and, more than all, the paintings, combined with the society I was in, threw a charm over the week at Florence that I shall never forget. The three girls are the most simple-minded, amiable trio I have ever known, especially the youngest, for beside those qualities she is sweetly pretty. We parted on October 30th with, I think, mutual regret,—they for Rome, I for Malta; but I am in hopes of seeing them at Rome soon. . . .

"You cannot imagine a greater pleasure than the 'Galleria Imperiale' of paintings and sculpture afforded me. I had no idea before that I should be able to appreciate them, but the pleasure is indescribable. The Venus di Medicis, Rafael's Madonna, and one or two others among the thousands I have seen, have pleased me most; the paintings more than the statues,—the Venus, the Knife-Grinder, and Niobe being about the only three I could appreciate. Canova's Venus I should also mention. How you would enjoy Florence! And amid my whirl of pleasure I often longed to have you all,—A——, and H——, and my dear father."

All through this earlier part of his career Key seems to have been a perfect martyr to headache. His letters constantly break off abruptly from inability to stand the pain, and "Oh! my poor head!" is a frequent ejaculation. Work or excitement always seemed to set it going. Thus the above-quoted letter goes on—

"*Nov. 5th.*—At Malta. My head aches dreadfully. We sail to-morrow morning at daylight with all the squadron for Naples—Oh! my poor head! I have had tremendous work for two days. I have received all my things, and am delighted with all,—plate especially. Yesterday I had 32 private letters and 12 public ones."

Cruising with the fleet gave him some, but not much, leisure to recall the delights of Italian art—

"I can write now a little more quietly, although this cruising with the squadron does not give me much leisure. Sir William Parker gives us plenty to do by signalling day and night—the more the better! Lord Minto told me that I stood very well with the admiral, and I promise you I do my best to keep so.

"We left Malta on Saturday, November 6th, and are bound, we believe, for Naples. We have the *Hibernia* (flag), *Trafalgar*, *Albion*, *Rodney*, *Superb*,[1] *Thetis*,[2] *Gladiator* and *Bulldog*.[3] All the admiral's family are on board the flagship. The knocking-about we have had the last two days have, I expect, rather sickened them of the sea. The admiral keeps his future movements a perfect mystery. I am still in hopes that I shall yet see Rome. The taste I had at Florence of the fine arts has made my mouth water for more.

"I forget what I said in my last letter, but I don't think I could have told you much. We had three days at Genoa after our quarantine expired; I expended them in sight-seeing. Notwithstanding pouring rain, we went everywhere—Captain Elliot, the ladies Elliot, and myself. The palaces, of which the finest are the Brignoti and Durazzo, are magnificent. The beautiful marble floors and frescoed ceilings far surpassed anything I had imagined. Vandyke's pictures are very numerous at Genoa; it would appear that a lifetime was hardly sufficient for one man to paint those we saw. There is something very peculiar in Vandyke's portraits; I admire them excessively; one can never mistake his sombre colouring. . . .

"I think I told you that Lord Minto and his family embarked at Genoa; I took them to Spezzia, where I nearly ran his lordship ashore, running into the harbour on a dark night, and a very serious mistake in the chart; but, however, keeping a weather eye open saved us.

"The next day we sailed for Leghorn. They landed; I spent the evening with them, and they asked me to go to Florence. That was the commencement of the most delicious week,—the happiest, I think, as far as pleasure will make it so. Erskine, a son of Lord Erskine, is attaché to Lord Minto; he has been many years in Florence and other parts of Italy, and therefore acted as our 'cicerone.' He was in our carriage, and on approaching Florence his lectures on every hill, house, and tree were delightful. . . .

"The railroad (imagine a railroad in Italy!) is open from Leghorn, through Pisa to Empoli, about 19 miles from Florence. The roads are remarkably good, as I believe they are all over Italy. We, the young ones, remained three hours at Pisa, and had barely time to examine that beautiful group of buildings—the Cathedral, Baptistry, Leaning Tower, and Campo Santo—all equally fine. The frescoes at the Campo Santo were the finest I had seen; and I must own I was a little disappointed. The fact was, I could not see to appreciate their beauties. I soon learnt that at Florence. I could not have conceived that the sight of paintings and statues could afford anyone so much pleasure as I experienced from it at Florence. But I believe the frescoes at Pisa have been much injured by an attempt at their restoration. . . .

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[1] Sailing line-of-battle ships.

[2] Sailing frigate.

[3] Paddle steamers.

"But what we enjoyed more than anything at Florence were the Palazzo Pitti and the Galleria Imperiale. The former we visited the second day. In this palace is said to be the finest collection of pictures in the world—more than 500, all first-rate, by the old masters. The luxury of it—I mean passing through it—you cannot imagine; one feels transported to another world. My favourite was Rafael's Madonna Leggiola; it is exquisite. Guido's Cleopatra, some smaller pictures by Christofano Allori, all those by Andria del Sarto, and Rafael's (of course), pleased me most. I did not admire Titian so much as I wished, or Guido. Altogether, I think two of the latter in our own National Gallery better than any I saw at Florence of his.

"Oh! the Venus di Medicis in the Galleria Imperiale in the Uffizzi Palace is *perfection*. That, Rafael's Madonna Madorina, and a little child by Correggio, are the only three I thought perfection, but they *are*. Canova's Venus is much inferior, I thought. The Knife-Grinder is very fine. . . .

"The Museum of Natural History is well worth seeing; the representations in waxwork of the magnified parts of insects and fibres of vegetables are curious; but the representations of the human frame are more than curious—disgusting! So true to life; I mean, death. The different stages of the plague are shown in wax. Ladies, of course, do not see these things; even I could not stand it. . . .

"I could talk for ever on Florence, notwithstanding I have very hard work. No bed last night, and I fear none to-night, as the admiral has ordered us to keep close to him all night—within hail. He is a most kind-hearted man, but uncommonly strict. It is quite a privilege to serve under his orders. He is so far superior a commander-in-chief to any we have in the service. Nelsons nowadays are rare. Lord Minto used to tell me such delightful stories about Nelson. His (Lord Minto's) father was Viceroy of Corsica, and Nelson was in the habit of staying with him. The present lord, then a boy, remembers how they used to laugh at him about Lady H——, etc. . . .

"I left Florence on Saturday morning,—Lord Minto for Rome, I for Malta. Poor me! The evening before, the three young ladies had, without my knowledge, gone in a body to Lord Minto to beg him to detain the *Bulldog*, and to take me to Rome. But he was conscientious, and could not trifle with the service. He told me of it the next morning at breakfast. . . .

"We are within 100 miles of Naples, and yet we do not know whether we are going there. Lady Parker declares she knows nothing; you may therefore imagine that the rest of the squadron are in ignorance of our future movements.

"Oh! for Rome! But I must not think of it. . . .

"I have not smoked a cigar in the *Bulldog*—yes! one. But at Florence I used to indulge. Erskine and I would roam out at twelve till past two, enjoying our weeds by moonlight on the banks of the *brown* Arno.[1]

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[1] This note about smoking has a special significance. Sir William Parker had a distinct bee in his bonnet on the subject. All officers joining his flagship were obliged to sign an undertaking not to smoke; and he carried his prejudices so far that, in giving a captain's commission to Commander Robert Tryon of the *Mutine*, in Captain G. W. Willes' death vacancy, he exacted the condition that he should abjure smoking altogether as long as he was under the admiral's

"Oh! There's that horrid flagship making signals!—False alarm!

"*November 18th.*—Oh dear! a week has elapsed since I wrote the above, and what have we done since that—Cruise, cruise, cruise! The admiral is looking for a gale of wind, and has found a sneezer at last.

"We have been to and fro between Sicily and Sardinia. *Vanguard* sprung her foremast, and has gone to Malta. The admiral made a signal for me yesterday, and asked me a good deal about Leghorn, Civita Vecchia, Rome, etc. I *rather* think he has his eye on Her Majesty's steam sloop to take him to the entrance of the Tiber; and I *rather* think, if he goes to Rome, the commander of the said vessel accompanies him. *Nous verrons.* Think of going to Rome and meeting those delightful creatures again! And here am I, wet through! My poor men are suffering from influenza. Fifteen of them taken ill to-day. The *Rodney* has sixty-seven. I saw the admiral's female arrangements yesterday; decidedly seedy.

"I wish you may some day know the Elliots. You will laugh at me, I know. I am always in raptures about somebody; but they are the most amiable, simple-minded people. Lady Harriett is one of those artless, open-minded, yet thinking girls that *you* would take to directly. Think of me entertaining these people at *my* table! . . .

"*November 20th.*—We have had a tremendous gale these last two days. Still off the south coast of Sardinia. *Gladiator*, our sister vessel, *and therefore rival* (though commanded by a post-captain of seven years' standing), has lost sight of the squadron during the gale, much to Sir Wm. Parker's disgust. We have now a dead foul wind for Leghorn, 300 miles, where I fancy the admiral goes first. . . .

"*November 24th.*—A seventh sheet of trash! Beating up the east coast of Sardinia and Corsica, somewhat in the vicinity of dear Lord Nelson's exertions. What an admirable commander-in-chief he was! I admire him the more now I can appreciate his exertions, and on reading the lives of Lord St. Vincent, Collingwood, and Exmouth. I feel his superiority as a commander and hero, to any man the navy has, or ever will possess; for, besides his qualifications, the same fortuitous circumstances can never again combine to establish one man's fame. I love him. I know him thoroughly—his vices and foibles. Dear, dear fellow! We ne'er shall see his like again!

"Sir Wm. Parker is a worthy follower of Lord St. Vincent, his uncle. He is a first-rate commander-in-chief, and I am sure would fight a good action had he the chance. We shall fall in with the Prince de Joinville at Leghorn. I hope we shall fall out with him too!

"Sir William has been so kind to me. He twice has made the signal to me—'Will you breakfast with me?' and I am the only officer in the squadron he has asked on board in any way. This is complimentary, considering I joined him as a perfect stranger.

"He is so very considerate to young officers—always seeking an opportunity to approve and not to reprove them, but never omitting either when required. . . .

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command. No professed smoker had the least chance of the admiral's favour; and, apart from this, his known wishes governed many officers as to smoking on board their ships. This idiosyncrasy of the really great admiral had a corrupting effect, but it made several men non-smokers for the rest of their lives.

"I have every probability of going to Rome with the admiral. . . .

"There are three books I should like very much: Vattel's *Law of Nations*, Ekins' *Naval Battles*, and M'Arthur on *Courts-Martial*. . . .

"*November 24th*.—The admiral has just made the signal—'An opportunity of sending letters to Civita Vecchia.' I presume *Bulldog* will go. . . . If *Bulldog* goes, I shall go to Rome with despatches for Lord Minto, and see —— . . .

"As they say on board the flagship, I was born with a whole dessert service in my mouth! . . .

"I am going to Rome. I shall be there to-morrow with despatches for Lord Minto. How delightful!"

Bulldog accordingly went round the fleet, collected the letters, and at half-past nine next morning was inside the little harbour of Civita Vecchia. Key at once proceeded to Rome—

"*November 27th*.—I have just returned from Rome. I had but one day there, but I did not let the grass grow under my feet.

"The kindness of the Elliots was beyond anything. I arrived, of course, quite unexpectedly at 6 p.m. They had a dinner-party. Directly they heard I was in the house, they sent to ask me to dinner, and waited for me. I found there, besides their own party, Lord and Lady Milton, Lord and Lady Conyngham, Mrs. Cadogan, Mr. Liddell, and Erskine. . . . The next day—for Lady Minto asked me to remain with them during my stay at Rome—they gave wholly up to me, taking me everywhere, the young ladies and Erskine. We went to St. Peter's, the Vatican, Capitol, Coliseum, Forum, etc.

"It was a tremendous day—gave me a dreadful headache in the evening. I cannot describe anything now."

The swell was breaking so heavily across the mouth of the harbour that the pilot would not take *Bulldog* out till the afternoon on the 29th of November, and she rejoined the fleet, now at anchor in Leghorn Roads, next day. Key presently had an opportunity of returning some of Lord and Lady Minto's kindness to him, which he was very glad to avail himself of. He got the admiral's permission to offer a passage to Mr. and Lady Mary Abercromby (the latter Lord Minto's eldest daughter) from Leghorn to Civita Vecchia, which they gladly accepted.

A new arrival excited some curiosity in the fleet at this time. The paddle steam frigate *Odin*, under the command of Captain Hon. Fred. Pelham, joined the fleet. She was another of the attempts to apply the paddle-wheel to the frigate-built ship carrying guns on her main-deck. In those days special builders fathered the designs. The designer of the *Odin* was Mr. Fincham, who was at that time master shipwright at Portsmouth. She was not altogether a success in carrying her intended armament. There were at this time several paddle frigates pierced for main-deck guns, but not carrying any. The only two that carried a full main-deck armament were the *Terrible*, designed by Oliver Lang, and the *Sidon*, designed as a sister vessel to the *Odin*, but altered by Admiral Sir Charles Napier, chiefly by adding depth to the design. The *Odin* carried twelve guns in all. But the *Sidon* carried four 56-pounders on the upper-deck, fourteen 32-pounders on a regular frigate's main-deck; and those who served in her were not a little proud of showing, I believe, the most powerful armament that had ever been put on a steamer's deck. The *Sidon* was also most successful in a larger proportionate coal-supply, but she was, so to put it, top-heavy, and was rarely known to sit upright in the water for many hours together. The French navy had been busy over the same problem, and had not really succeeded even as well as the English—neither navy producing any type which it was thought well to continue, even had the screw not come in to put the whole idea to flight. But the *Sidon* and *Odin* carried themselves frigate-wise by painting checkered sides. Other steamers were painted black.

Little as appears in Key's writings at this time to prove it, his eyes were keenly fixed on the question; and this will later on be shown.

In his official letter to Sir William Parker, after his first visit to Genoa, Spezzia, and Civita Vecchia, he marks—by a single stroke, as it happens—his watch on the material change and progress in the navies of the day. Up to about this date the method of weighing anchor by means of a "messenger" was all but universal. The messenger was an endless rope at first, and then an endless chain, which was actuated from the capstan in the after-part of the ship, and passed round rollers in the fore-part. The messenger being set in motion by the power of the men at the capstan-bars, the incoming cable was continuously lashed to the part of the messenger which was travelling aft by means of soft pieces of rope called "nippers," and it was a consequence of this method that when the strain became great the cable "slipped through the nippers" and ceased to come in, relieving, of course, the strain on the capstan, but really failing to do the work. When *Bulldog* was at Genoa, the French line-of-battle ship *Jena*, during a strong south-east breeze, struck the ground abaft, "and," says Key, in reporting the occurrence, "while attempting to shorten in cable, a heavy swell crushed the paul of the capstan, swinging it round and severely wounding twenty-two men. *Her cable is brought directly to the capstan.*"

The fact was, that the *Sidon*, and perhaps other of the new steam ships brought under Key's notice, had capstans fitted which took the cable direct, its links fitting into suitable beds round the barrel so as to grip it without any slipping or yielding such as the messenger system allowed. Whether the new plan was good or bad was a matter in immediate debate. In underlining the words above printed in italics, Key withheld his opinion on the point, but allowed it to be inferred that the want of slipping or yielding was the cause of the accident. Another man might readily have condemned the new system on such a ground. Key kept his mind open, and lived to see the "messenger," on his own advice, absolutely disappear from every ship in the service.

After a short stay at Leghorn, Sir Wm. Parker hoisted his flag in the *Bulldog* and took her to Civita Vecchia, where he disembarked, and, taking Key with him, proceeded to visit Rome.

Key was again full of rapture over his closer acquaintance with Italy and Italian art. With St. Peter's he was absolutely satisfied, and did not feel, as some do, that ornament and gorgeousness confused the mind, lowered it, and forbade its understanding the grace and wonder of the building itself. With the Coliseum he was much disappointed at first—

"'It was only after passing it daily, and minutely examining the whole ruin, that I could form an idea of its immensity as an amphitheatre 'which in its public days unpeopled Rome.' The baths of Caracalla gave me, I think, a greater idea of the magnificence of the Romans in their luxuries than even the Coliseum."

Falling back on art, he writes—

"The Vatican itself is the study of a month. My time was so limited that I determined I would not lose time over minor interests. I therefore begged to be taken at once to what I was most anxious to see—Rafael's Transfiguration. It is sublime! It strikes one at once as the finest picture in the world. Every part of it is beautiful, notwithstanding his odd fancy of introducing two distinct subjects, viz., on the mount the transfiguration, and at the foot, the boy possessed with a devil, with a multitude, and the apostles. They would have pleased me more as two pictures."

He thought the Communion of St. Jerome by Domenchino was second only to the Transfiguration; was enraptured with the Apollo Belvedere and the Laocoön, but complained of the galleries in which they were placed. The Dying Gladiator in the Capitol was his third favourite—

"It would make a good pair with a Sophocles in the museum of St. John Lateran, a magnificent antique statue discovered about eight years ago, I think, in the neighbourhood of Ostia.

"In the Capitol there is a horrid copy of the Venus di Medicis, which I was prepared to admire, having heard much of it—disgusting! Where shall I go to now? Guido's Aurora in the Rospigliosi Palace, a fresco on the ceiling—delicious! His Beatrici di Cenci in the Barbarini Palace is quite fascinating; I was obliged to be dragged away.

"The Borghesi Palace has a fine collection of paintings, and to my delight some very fine Andria del Sartos. We went over several of the artists' studios. . . .

"One of the most striking features of modern Rome is the beauty of its fountains. At every turn you hear the gush of water; they are in every variety, and always in keeping.

"The last time I was in Rome I divided my time between the admiral and the ladies Elliot. You can guess who had the largest share. The morning after my arrival I received a kind note from Lady Minto begging me to consider myself engaged to dine there every evening while I remained at Rome. Such delightful evenings! Such cheerful, simple-minded people! The last evening they had a reception, with which you may imagine I was rather disgusted. No end of princes and princesses. I wonder when I shall meet them again. I really think they were sorry to part with me. There's vanity for you!

"I told you of our presentation to the Pope; it is an interesting occurrence, is it not? Naval officers coming from their ships to kiss His Holiness's toe? Not quite that; but I shall not forget it soon. I daresay some wiseacre will think it his duty to bring it before the House, unless Parliament is prorogued before it gets home. Fred. Stanley has been hitting Lord Minto hard, though to little purpose. . . .

"The admiral is so kind to me. This is better than the West Indies, is it not?"

The sister art of music was not omitted from Key's mind while wandering in the enchanted lands of painting and sculpture. He had heard the song "Pestal" for the first time, and was deeply struck with it. The line of his taste was shown by his calling "The Better Land" and "Ruth" his favourite songs.

The fleet spent their Christmas in the Gulf of Spezzia. From one of the neighbouring heights, on which Napoleon had built a fort, Key saw Genoa, Leghorn, Pisa, and Carrara, and not only saw them, but could with a telescope make out the buildings in each place.

The fleet afterwards visited Palmas Bay, and the admiral went to Cagliari in the *Bulldog*. On the way there Key wrote—

"I am reading *Corinne* for, I think, the third or fourth time, but never before in French; and having just left the scenes, of course I read with the greater interest. I hardly know what to think of it. Sometimes I am quite disgusted, at others charmed. Oswald is a selfish brute, without a redeeming quality. I think his character, as far as I have seen of it as yet, is mean and pitiable in the extreme, and, if I remember right, the worst part is to come. But yet, I should think Mdme. de Staël did not intend him to appear as a despicable character."

This was written on the last day of the year 1847, and Key fitly closed it with the following general sketch of the political situation—

"I wonder whether you know anything about Italian politics? I daresay not, which is the reason I have not mentioned them, but they are, at this moment, deeply interesting. The Pope, by his establishment of the 'Consulta dittato,' composed of two or more representatives from each State, followed by many other liberal measures, has raised a great cry throughout the other Italian States for constitutions, freedom of the press, reduction of duties, etc. Sardinia, Tuscany, and Modena have given in on many points; Lucca has abdicated, and the Duchess of Parma is just dead, the State reverting to Modena. Austria, of course, will not yield an iota for the Venetian States, neither will the King of Naples for the Sicilies; the consequence is that Sicily is, I imagine, on the verge of a revolution, and if it does take place the King will have no friends."

And then the summary for the ship came in—

"My dear *Bulldog* is, I am happy to say, improving. She has the name of being in the best order of any in the station. I know that she is not *that*, but still, considering our wretched crew, she is very fair. She is very pretty—everybody agrees—the prettiest in the service, and I think the fastest. *That* remains to be proved. How my dear father and H—— [his brother] would enjoy a cruise in her. She is well known on this station already. . . .

"New Year's Day. I went to bed last night at about ten minutes to twelve, leaving word with the officer of the watch to call me at one. I had just fallen asleep when down he came to tell me it had struck twelve, and to wish me a happy New Year. It pleased me so much, so very much.

"I had all the officers to dine with me to-day, at least eight of them, as many as my table will hold comfortably, and shall have the rest on Monday. *There* is the difficulty in commanding a ship—the management of the officers—especially in my case, where the whole of the gun-room officers[1] are older than myself. I am learning the lesson daily. In the meantime I am very distant with them—that must be, though I find it hard, very hard, at times.[2] Many and many a lonely hour do I spend in my cabin, and often do I long to have more familiar intercourse with the officers, but I could not do so without partiality, I am sure, and therefore I refrain. . . .

"*January 3rd.*—This is tedious work, though I am really enjoying the rest and relief from excitement. We have been three days off the same spot (Cape Carbonara), attempting to work to windward against a fiery breeze. Though I call it rest, I suppose it is because I get none, not having been to bed for three nights. The admiral every night makes my signal to go in-shore, and carry a light, to act as a warning to the squadron. It's a regular case of 'the boys and frogs'—fun to them, but death to me. I have to go creeping close to the rocks and islands these dark nights, while they are dancing along, two or three miles from the shore, knowing that when I get ashore it will be plenty of time for them to look out. However, I enjoy it. It keeps me on the *qui vive*, and I get many a nap in my delightful armchair. . . .

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[1] *i.e.* the lieutenants, master, doctor, purser, etc., now called "wardroom officers" in all ships, as they were then called in line-of-battle ships.

[2] Whatever Key might have thought on this matter, it is almost impossible that he could ever have been "distant" with his officers in the full sense of the word. Undue familiarity was impossible with him, but his manner on all occasions was the very reverse of "distant." The officer of the watch would never have ventured to awake a really "distant" commander to wish him a happy New Year. No doubt the "distant" school was that of his commander-in-chief, which he was likely to imitate; but Key could scarcely have laid down its principles as Sir William Parker himself did in the latter part of the following passage:—

"I feel more than ever the necessity of *judicious*, steady, and *firm* officers being kept afloat, who will, on the one hand, check the absurdities and *presumption* of modern innovations which are undermining the discipline of the service; and, on the other hand, avoid the severity and harshness which characterised the organisation of some ships in *former* days. The *midshipmen*, *mates*, and *junior* lieutenants, all require a *strict* but courteous control; and if a stand is not made against their flippant and conceited demeanour, we may witness a navy as brave, but in its efficiency lamentably degenerated, from the days of Nelson and our successful leaders during the revolutionary war" (*Life of Sir W. Parker*, iii. 261). Key would have agreed to the general necessity of discipline, but he would not have seen that the junior officers were either more flippant or more conceited than formerly—as indeed they were not. If Sir William Parker sometimes imitated too closely the rigid side of St. Vincent's method, Key would have been more likely to have exaggerated the cordial side of Nelson's method in his imitation.

"Will you get someone to overhaul the official Gazettes of September (I think) for the report of the San Lorenzo affair in the Paranà, with the convoy (if Charlie Hotham had mentioned our names there—Levinge and myself—we should have been posted when we had served our time); when found, will you get me two copies?—send one to me, and keep one at home. . . .

"How quickly the last eight months have passed! How I look forward to paying off my first ship as captain, and then living on shore. Shall I ever marry? It is getting less likely every day. I find each year makes one more fastidious, and I suppose at last I shall find one to please me, and I shall not please her. . . .

"You cannot imagine the effect that the occupation of the last two months has had on me. The many new subjects for thought and objects of interest in reading that my visits to Florence and Rome have opened to me. I remember one of the ladies Elliot saying to me at Rome, 'Now we are wasting our time, we rarely open a book.' I could not help answering, 'It appears to me that we are reading a better book than any yet printed, and one that will create a more lively and more lasting impression.' I cannot imagine any worldly study that will tend so much to enlarge the mind, give a higher tone to the feelings, temper the passions, and—it is needless to add—improve the taste, than the actual contemplation of works of art in their perfection. I may be enthusiastic, but it is difficult to describe the effect they had on me. They, as well as I, were visiting these scenes for the first time, and some of them experienced as much, if not more, pleasure than I, their minds being better prepared to appreciate them at once. But the effect is not at the time; it is afterwards. For instance, while looking at the Apollo Belvedere one feels speechless; really entranced; it is not reality you are looking at, it is a magnificent *idea*, the highest conception of the highest order of poets. There is no imitation; it is not an object at the sight of which one would say, 'How like life!' It is a distinct art. Even the Dying Gladiator, exquisitely beautiful as it is, does not raise in my mind the same ideas. In looking at this, I could go close to it and examine each part; the expression of the face, which shows, as Byron so truly says, that he 'consents to death, but conquers agony'; the position of his limbs; the form of his arms: all are exquisite, all evidently the successful results of the study of man's form *as he is*. The other I could imagine wrought by one who had never seen a man, but depicted him as his imagination pictured that he should be. These, to my mind, form two distinct classes of statues. This is the work of genius; that the result of labour and talent. But I think it is not at the time that you can arrange any of your ideas of what *sort* of pleasure you are deriving from their contemplation. It is afterwards, on reflection, that the real pleasure comes. But perhaps this would be the case only with those who were hurried as we were, and saw so much in so few days.

"I think I am glad that I did not see any of their most solemn religious services, although I am curious to know how I should have been affected by them. I can hardly make up my mind whether the feeling raised by these solemnities is likely to be beneficial or hurtful. To a lively imagination, I should fear the latter; for though one's heart is open then to receive the slightest impression—especially of love, or adoration—yet I should think it would be more the effect on the senses than on the mind. I always—or frequently—when I see the priests performing mass, especially if accompanied by music, feel inclined to fall on my knees; but this is not devotion—merely veneration; and this is no nice distinction, I should fancy, but is, in fact, the basis of the difference between the two religions.[1]

"With what increased pleasure I shall visit our cathedrals at home. There we excel. How superior is the Gothic to the Grecian for church architecture! Nothing can be more beautiful than the latter for a pagan temple. Do you not agree with me?

"The Pantheon, which was actually built and used as a temple, and is now a Christian church, is the most beautiful building I have seen; so exquisitely proportioned (saving two modern excrescences behind the portico of Urban VIII., a wretch who was the first to use the Coliseum as a quarry to build his palace from, and was followed by many others). . . .

The close of the year 1847 was the close of Key's schooling in the world of art. Henceforth the *Bulldog* and her commander were to spend a time of incessant and ever-changing excitement. The world in the first weeks of the year 1848 took a plunge into the caldron of political unrest, and insurrection and war was to be for months its normal condition.

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[1] I recollect, in a conversation I had with Key some seventeen or eighteen years after this, his recurring to some cognate ideas. Of the effect of ornate ritual, etc. And then I remember his somewhat surprising me by saying, that of all ritual ceremonials that which most fitted his taste was the Irvingite practice.

CHAPTER IX

THE *BULLDOG*—1848

"ON the 1st January 1848 Sir William Parker received from a private source an intimation that on the 12th of the month an insurrection would take place at Palermo. He despatched the *Gladiator* thither to ascertain the correct state of affairs. She returned on the 8th, reporting that the Consul gave no credence to the rumour, but with a communication from the merchants that they did. Sir William thereupon sent the *Bulldog* to Palermo, which fortunately arrived on the 12th, when the revolt broke out."[1]

The fleet was at Nelson's old anchorage in Palmas Bay, in the south of Sardinia, when Key got his orders for Palermo. These pointed out that the 12th January was the birthday of the King of the two Sicilies, and that the apprehended rising was expected on that day, because it would be understood that if the King did not on that day grant the concessions in the direction of Pio Nono's changes, they would not be granted at all.

But the following passages in Sir William Parker's orders to Commander Key would seem to show that even now there was not much apprehension in the official circle of what was about to transpire, and none of the tremendous European convulsion which was to follow[2]—

"You will on your arrival confer with the Consul, and apprise him of the object of your visit, that he may communicate the same to the merchants. And you will remain at Palermo with the *Bulldog* until accounts are received from Naples which may lead you to anticipate disturbances at Palermo. You will then rejoin my flag at Malta, looking out for the squadron on your route. But should it appear desirable to you, from the state of affairs, to prolong your stay at Palermo in support of British interests, you will apprise me thereof by the earliest opportunity for Malta."

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[1] *Life of Sir William Parker*, iii. 285.

[2] Key himself was of opinion that nothing would follow. Writing to Captain Codrington of the *Thetis*, at Naples, on the 11th January, he says: "From all I have heard, I should imagine there is but little chance of anything taking place

Sir William Parker also wrote thus—

"Much circumspection will be necessary at this crisis, in the conduct of the officers and men of Her Majesty's ships who may land at Palermo, not to interfere in the political dissensions of the country, or give cause for the belief that the *Bulldog* is sent with the view of taking any part therein."

But there was a secret memorandum put into Key's hands authorising him to afford political refugees "the means of escape from the vindictive measures of the Government," after satisfying himself that they were "deserving of protection before such refuge was afforded."

So Key sailed away from Palmas Bay to Palermo, arriving there at 2 p.m. on the 12th of January, and plunging at once into a series of exciting and totally new experiences. He writes home on the 17th February—

"Here I have been in the middle of a revolution, as I daresay you have heard before this. I am always in for something! But it is a long story, and I cannot tell it to you now. The revolution began the instant we arrived at Palermo—the very hour! In two days they began to bombard the town from the castle; I then embarked all the British subjects. Five thousand fresh troops and seven steamers were sent from Naples, making in all 11,000. Nevertheless the people have continued to gain ground, and finally, having beaten the troops from the palace, the bank, and the barracks, they made a resolute attack on the castle. After the engagement had lasted three hours, an order came from the King at Naples to surrender the castle. We—the *Vengeance*[1] and *Bulldog*—made them cease firing, and the troops embarked.

"The Sicilians have now nearly possession of the whole island, and it rests with themselves whether they will remain united to Naples or not. The King, by falling into their views, *can* keep possession of it. He is an ass,[2] and I fear will not see clearly.

"I have been trying in my small way to get England to mediate, and I begin to think it will be done. I am now carrying an application from the committee

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either at Palermo or any other part of the kingdom, from want of leaders, and from the watchful eye kept on any movement by the Government. Is not this the case?" But Lord Napier at Naples saw more clearly. He believed, on 5th January, that revolt in the Neapolitan kingdom was much nearer than was generally supposed.

[1] Captain Stephen Lushington (Key's old captain in the *Cleopatra*).

[2] The expression is justified by Lord Napier's terse estimate of his character-

or junta to Lord Minto and Lord Napier to use their influence to obtain England's mediation.

"Think of me for *three weeks* with Lord Mount-Edgcumbe and his family[1] and fifteen other ladies in my cabin. It is all over now.[2] We shall be in Naples in an hour, and return to Palermo to-morrow, then to Malta."

The following is Key's official narrative, which, with later letters, was sent home to the Admiralty and the Foreign Office—

"H.M. Steam Sloop *Bulldog*,
"PALERMO, *17th January* 1848.

"SIR,—All communication by land with Messina being cut off, and the steam-packet from Naples having ceased to run, I take advantage of the *Fair Rosamond*, R.Y.C. (Captain Lyons), to send this to Naples, from there to Malta.

"As I have but a short time, I can do no more than endeavour in a few words to give you an outline of my proceedings since my departure from the squadron on January 10th, reserving the details for the next opportunity.

"The *Bulldog* arrived at Palermo soon after noon on January 12th (the King's birthday). A few minutes after the ship was anchored a boat pulled alongside with a Sicilian in a state of great excitement, who, I learnt, had that morning been the leader of a partial rise against the Government. He had been disappointed of the arrival of confederates from the country, and therefore had been overpowered, and barely escaped with his life into a boat. I received him on board. On proceeding on shore and communicating with H.M. Consul, I learnt that this insurrection had been published by printed bills as to take place on the 12th. Being put down so soon, he considered it over. On the night of the 12th a large body of armed people came in from the country, and on the evening of the 13th made themselves masters of the police office, public conveyance office, the Porto Termini, and then proceeded to attack the bank. They were repulsed. They then barricaded the main streets, the troops firing down the Toledo or principal street.

"I then (the forenoon of the 13th) sent round to the British merchants and residents to meet me for a conference. I found considerable alarm prevailed among them, not against either party, but in case large bodies of armed people should come from the country, they being not under the control of the leaders of the movement, and, the town being in the hands of the populace, would probably resort to their custom of pillage.

"I then took the following measures for their safety:—

"I offered to take the valuables, money and jewels, of any of them on board at once. I offered the *Bulldog* and the British merchant vessels as an asylum

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"It is impossible to predict political issues, especially when they are regulated by a sovereign so obstinate, so mysterious, and yet so inconstant, that it is impossible to conclude from his previous conduct what course he will pursue in future. He might rise a reformer to-morrow morning, and be a despot again next week." Lord Napier to Sir William Parker.—*Life of Sir William Parker*, iii. 290.

[1] He had made their acquaintance at Leghorn in the previous October.

[2] It was, in fact, only beginning.

should any wish to embark with their families, establishing a signal at the Consulate for them, in order that they might call our boats on shore when they wished to embark. I then looked for any position that might be easily defended by a small body of men, to serve as a rendezvous should the British residents be seized with a sudden panic. This, I found, might be done in the block of houses inhabited by the Consul, the Earl of Mount-Edgcumbe, and several British subjects; I therefore sent Lieut. Swinburne with sixteen men for that purpose. This house is close to the sea; at the back is a terrace, the gate of which opens close to the landing-place. Of this gate I secured the only key, intending it not only as a means of egress for the people embarking, but also a sure passage to communicate with my own men. I established signals with Lieut. Swinburne by night and by day.

"On the 14th the Castel-a-Mare commenced to throw shells into the town; I immediately went to the palace to remonstrate: they only promised to spare the English quarter.[1]

"During the night of the 14th and morning of the 15th the shelling continued at intervals; killing the helpless, destroying the houses, and endangering the foreigners, without any other result. At noon on the 15th I again went to the palace to represent this, and to demand a notice before the town was bombarded. The notice they gave me was that 'the bombardment shall be discontinued, and shall not be again commenced until the people advance in masses to attack; then *they* will be the objects for the shells, not the town.' With this I was forced to be satisfied. On my return through the town (a walk of a mile) I found the feeling of the people greatly changed towards me. Instead of the enthusiasm and vivas with which I had been greeted both times on my way to the palace, I saw discontent and disappointment. They stopped me and demanded what the English were going to do for them. I told their leaders that I had no authority to interfere, or to take any part with either party. There was then a general murmur of 'The English have deceived us.' They allowed me, however, to return to the Consulate; the leaders came there, and said that until now they had promised and had sufficient influence to protect the foreigners, but now they could promise no longer; and if the English quarter was spared, the people would take possession of the British residents and keep them as hostages while the town was being shelled.

"At about 3 p.m. on the 15th, the people, having made a general attack on the bank, the shelling recommenced, and, as a proof that the alarm of the British subjects at this time was not without foundation, a man was killed in Lord Mount-Edgcumbe's house while I was there, and a shot passed through the room in which were two English ladies.

"Mr. Franc, a British merchant, had two shells burst in his house, and I could quote several other cases of the same kind. At 4 p.m. I called a meeting of the merchants; found them all agreed with me in the propriety of an immediate embarkation. I instantly sent round to the American and English merchant vessels to prepare to receive anyone I sent to them, and to send their boats at 6. This they did most readily. I sent to all the British subjects (whose names I obtained from the Consul) to be at the landing-place between 6 and 9 p.m. Before 8, in spite of wind and rain, all the British subjects were embarked, excepting the Consul and one or two who wished to remain till the latest possible moment.

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[1] Consul Goodwin wrote one of many hurried notes:—"DEAR SIR,—Great alarm prevails in this quarter owing to shells having fallen here. Would it be possible to induce the commander of the castle, Colonel Gross, to spare this quarter from bombardment?"

"At the same time a squadron of Neapolitan steamers arrived with 5000 troops, and on the morning of the 16th I called on Prince Louis, the Commodore of the squadron, to ask his intentions. He trusted that there would be no occasion to bombard the town, but that when the troops had landed they intended to march straight to the relief of the royal palace, which was now cut off from all communication with any other part of the town."

To Lord Napier, at Naples, Key wrote on 18th January—

"The squadron with 5000 men arrived here on the evening of the 15th, and they were disembarked before daylight the next morning. On that day many Sicilian noblemen and gentlemen sought refuge on board the *Bulldog*. We learned that many of the country people had returned to the country with their arms; this, showing an evident loss of confidence in their strength, gave me reason to expect that the troops would instantly march to the relief of the palace. On the afternoon of the 16th a detachment of troops, who had advanced for that purpose, were beaten back by the populace. On the 17th this was repeated and followed by an attack on part of the barracks, which they carried, and captured 200 or 300 men, marching them out with their band playing in advance.

"The troops appear completely paralysed. All their positions are cut off from each other; the country people are re-entering the town, and the people are so firmly established that nothing but a general bombardment can dislodge them; and should that be resorted to, the only effect would be to destroy the town, as they have possession of all the gates, and can leave the town therefore with their arms. The local government has no power to grant concessions; the leaders of the people feel sure that those under them will listen to no reasonable terms.

"From all these circumstances it cannot but appear that the ultimate success of the people is almost inevitable; and this, in their present exasperated and uncontrollable state—that would no doubt increase with each day's resistance and success—would, it must be feared, not only cause much bloodshed, but ruin their own cause by their excesses and unreasonable demands.

"This I conceive to be their present position, from which I cannot foresee that anything can rescue them but the interference of a third party powerful enough to give both Government and people confidence in the guarantee that any terms consented to should be strictly complied with.

"I trust you will pardon me if I am presuming in thus expressing my opinion; but I am urged to it by the sight of so much bloodshed, both at present and that to come. . . .

"The prince sailed this morning, I know not whither. I requested warning of the Neapolitan Commodore before he opened fire on the town. This morning he came on board to tell me they should open fire if they observed large masses of the populace collected; but he would send me word before he did so. This I must consider sufficient warning.

On the 20th of January he recapitulated to Sir William Parker the contents of his letter on the 17th, and went on—

"The present actual position of the two parties is this:—

"The Government hold the palace, the forts, and the barracks, but cannot communicate with either. The supplies of water are cut off from each; the stock of provisions is fast failing them. The troops will not fight, or those who do march out, fight unwilling. The populace hold the town and country, are increasing in strength daily, and I imagine cannot be dislodged from the town but by a general bombardment; were they so dislodged, they would still retain their arms and original strength. The Consuls have made a formal protest against the bombardment under any circumstances.

"Situated thus, the Luogotenénte has consented to despatch a steamer to Naples to represent the desires of the populace to the King. These are: *A constitution founded on that of* 1812, and I firmly believe that they will accept nothing less; meanwhile the populace will not consent to an armistice.

"I have this day received a letter from Lord Napier enclosing a proclamation from the King of Naples granting some concessions, and promising others, but not sufficiently substantial to satisfy the people; of this I am so convinced, that I will not detain this letter to see the result of it. I cannot but think that unless H.M. will agree almost entirely with the wishes of the people, that he will find himself in danger of losing Sicily. The people have no faith in his promises without a guarantee; they cannot, from past experience. Their laws, *as they exist at present*, are nearly sufficient to satisfy them, *were they put in force*; they will not, I fear, be contented without some security for good faith, and this, I foresee, can be obtained but by a third party, who will guarantee that the people shall have the power to carry on negotiations in their present relative position without the necessity of constant hostilities; in fact, a pledge for mutual good faith, thereby establishing confidence on the part of the people in the Government, which at present does not exist, and this, not to be a guarantee for the future, for that the people must themselves provide. The guarantee will be that they shall actually obtain the terms resolved on: they must learn how to retain them.

"The moderation of the people is beyond praise. The well-established characters of the leading men, the Prince Scordia, Duc di Monteleone, and, I may add, every Sicilian noble of the popular party, is the best security against excesses.

"I fear I may appear to write too freely, and with a partial view. My opinion has been formed while witnessing disinterestedly every step of this movement, and from intercourse directly or indirectly with the leading men on both sides.

"I hope my account of proceedings will show that I have never in the slightest degree committed a breach of neutrality, but I cannot help forming an opinion, and I think I should not be doing my duty did I not express it now.

"I have some reason to believe that vocabulary P.I.Q., geographical A.D.I., is thought of for some ultimate purpose. I should think merely usated [?]; but K.F.L., P.H.N. would have the worst possible effect.[1]

"The *Gladiator* arrived this evening from Messina."

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[1] The letters employed as a disguise refer to the signal-books of the day, to which reference must be made in order to ascertain their meaning, and no copy remains.

Captain Robb of the *Gladiator*, being Commander Key's senior officer, took the control of affairs and the responsibility from Key's shoulders. But it is manifest from these excellent letters, that wisdom, judgment, and clearness of view, were his in a remarkable degree. It is almost impossible, in reading these able papers, describing acts characterised by such decision, coolness, and moderation, to realise that the whole was the work of a naval officer only just completing his twenty-sixth year, and still in all the pride and unsettled eagerness which are the heritage of the naval commander in the first few months of his first command. Reflecting upon the suddenness with which he had found himself placed as the leading man, and the leading mediator, between the infuriated parties contending for the control of a great city, we cannot but be struck by the aplomb of the tone of his letters. They read as if he had been all his life in the midst of revolt, and understood all the courses of it from the results of a long experience. No wonder that Sir William Parker should write home that Commander Key "appears to have acted with the greatest judgment, and with the most benevolent feelings and attention to all parties in the trying position in which the British residents were placed from the bombardment of the city by the Government forces."[1]

Another illustration of one of the features of Key's character which has been before noticed comes out in this correspondence. His public despatches are, as we have seen, long, lucid, and full. His private letters to his family, which were so full and so varied as long as he was under the enchantment of Italian art, fall at once to be the merest scraps, dashed off at odd moments, and in the most perfunctory way. It was the same throughout the whole process of recovering the *Gorgon*, and betokened that oneness of purpose and concentration of the entire soul on the business in hand. To my mind this quality is one of the signs of greatness, and I have always regarded it as a principal element in the great side of Nelson's character.

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[1] The admiral wrote directly to Commander Key, under date, Malta, 29th January, saying: "I cannot let the *Porcupine* proceed to Messina and Naples without thanking you for your letters of the 18th and 20th inst., and assuring you that I very much approve all your proceedings; and your benevolent exertions and kindness appear to be properly appreciated by all parties."

Key himself apologised to his home circle for the meagreness of his reports, and said, under date 29th February—

> "This must be very vexing to you, receiving a letter from me like this when there is so much of interest going on round me, and in which I have been so actively engaged. I can *act*, but I cannot think or write."

It has, however, been made clear that he could both think and write, but in such times only for the good of the public service, and on that which demanded his whole attention.

While the *Bulldog* was at Malta, news arrived of the successful revolt of Catania. The terms offered to the Palermitans being, as Key had surmised, rejected, there was further conflict and bombardment on the 22nd. On the 23rd and 24th the troops were worsted in two attacks. The bombardment was renewed, but on the 26th the troops at the palace surrendered, and on the same day the *Vengeance* arrived.

"At midnight on the 28th January, King Ferdinand proclaimed a constitution for his subjects of a more liberal character than that of any other Italian State; but no hope was held out of a separate Government for Sicily according to her former constitution."[1]

On the 29th of January the revolt broke out at Messina, and in the course of time the whole of Sicily passed out of the control of the King, except the fortress at Messina, which his troops never lost.

On the 5th of February the *Bulldog* sailed for Naples, bearing, as Key's letter home has already mentioned, a request from the provisional committee of government at Palermo for the mediation of England through Lords

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[1] *Life of Sir William Parker*, iii. 300. "Early in the year the King of Sardinia had promulgated a new constitution, beginning with an announcement that the times were ripe for greater changes" (iii. 287).

Minto and Napier. On the same day the royal troops wholly evacuated Palermo, and sailed for Naples. Nothing came of Key's mission for the time. Lord Mount-Edgcumbe had greatly exerted himself at Palermo as an independent intermediary between the Government and the revolters, counselling the latter to moderate their demands, because it would be impossible for them to gain more than could be accorded to the other Italian States, and that such demands would meet the disapproval of any mediating powers; and that, if the King's concessions were accepted on the continent and rejected in the island, the King's troops, including the Swiss (about 6000), could be concentrated on Palermo, which would suffer all the horrors of bombardment and blockade. It was true that the acts and conduct of the revolters had placed them in a very strong position, but it was not to be supposed that such success would attend them against the whole force of the kingdom. It would be wise to accept offers made with proper guarantees. Otherwise their holding out might drive the King to extremities, prevent mediation, and prolong a struggle full of horrors, and uncertain in its issues.

A little amusing byplay is discoverable here and there in the correspondence which has been preserved relating to this time. Key's refugees seem to have given a good deal of trouble, finding themselves masters of the situation with so kind-hearted a man as the *Bulldog's* commander. Some were invalids—or pretended invalids—who possibly required more attention than it was convenient to give them. So Captain Lushington one day gave Key leave to go alongside the Mole for a few hours, using the weather as his excuse. "The devil's in it," said a postscript, "if this does not clear off some of the invalids!"

An assault on the Castel-a-Mare being expected on the 30th of January, Captain Lushington ordered Key to be ready to take the armed boats of both ships for the rescue of the women and children in that fortress; but it was not necessary to put this measure in force.

Captain Lushington had induced the commandant of Castel-a-Mare and the committee of the insurrectionists to abstain from firing from or at the batteries on the Mole, in order to secure the safety of the shipping within the latter. Key was ordered to enforce this agreement so far as the Mole was concerned, using his discretion as to means, but avoiding the use of force until all other means had failed (30th January).

On the 1st of February, Key received orders to discharge all the refugees into vessels about to sail for Malta, or otherwise, as there was not room in the ship for more than the British merchants and their families, and "as Her Majesty's Government could no longer be at the expense of retaining them on board a man-of-war."

When Commander Key got to Naples on the 6th of February, he found that Lord Minto had arrived there from Rome. Key had been ordered to return at once to Palermo, "only waiting for such immediate answers as Lord Napier might please to give him"; but he took on himself to postpone his return, at the request of Lord Minto, "until the King had decided on the steps he should take regarding the constitution of Sicily, a point then under the consideration of H.M. Council. On Tuesday, 8th inst., nothing having been determined, his lordship said he would no longer detain him, but expressed his anxiety to hear as early as possible from Palermo." *Bulldog* accordingly was back at Palermo on the 9th.

Key seems to have had no less than twenty-seven persons entertained in his own cabin, and at his own table, for periods varying from two to twenty-two days.

On 12th February *Bulldog* was ordered once more to Naples to be at disposal of Lord Minto, and she got there next day, not leaving again till 7th March. While there Key wrote—

"I am keeping H.M. steam sloop under my command in readiness to convey the Earl of Minto to Palermo when he can obtain terms for the Palermitans sufficiently advantageous to enable him with confidence to undertake a mediation between His Majesty and his Sicilian subjects.

"A universal feeling in favour of the King prevails at Naples, and tranquillity is everywhere restored. The Neapolitans are now complaining of the obstinacy of the Sicilians—that is, they, having gained all *their* present advantages at the expense of Sicilian blood, are willing now to prevent the Sicilians from sharing what they alone have struggled to obtain."

Naples was now the centre of the political storm, which was exhibited to the naval world by the influx and efflux of a continued stream of warships of all nationalities. There were fears that Austria might step in with an army coming by sea, and assist or compel King Ferdinand to revert to reactionary measures. The bustle of the arrival and departure of English, French, Austrian, Spanish, Neapolitan, and even Swedish men-of-war, was constant, and culminated in the arrival of the *Hibernia*, flying Sir William Parker's flag, the *Trafalgar* and *Superb* line-of-battle ships, with the *Hecate* steam sloop, making up the numbers of ships which treaty allowed to appear off the city of Naples—

"Yesterday," writes Key on 29th February, "I was presented to the King, with the admiral and his captains. The King complimented me on my ship, and said how much he had heard of her and her exertions at Palermo. This must have been meant ironically, as my exertions, if any, were against him.

"The work I had at Palermo has been an enormous expense to me. The Government, I hope, will repay me; Lord Minto and Sir Wm. Parker have both written very strongly about it.

"Many thanks for the books—Vattel," etc.

After a change of ministry at Naples, the Government agreed to the sitting of a Sicilian Parliament, as well as to other concessions, and Lord Minto embarked on board the *Hibernia* for Palermo to act as mediator. Key assisted to tow the fleet to sea, and then accompanied them, towing the line-of-battle ships individually into Palermo Bay on the 10th. But on the 6th of March the news of the outbreak and completion of the French revolution had reached Naples, and it was like the fiery cross in its effect everywhere. The revolutionary caldron boiled over. The Sicilians at Palermo repudiated King Ferdinand, and declined the terms they had been expected to accept. Lord Minto in consequence at first refused to land, but, a compromise being effected, proposals were drawn up and sent to Naples.

On the 24th March letters arrived at the British Consulate, Palermo, representing that the town of Marsala was in the hands of an armed mob by whom the National Guard had been overpowered, and large sums of money levied on the native inhabitants. The British merchants, whose property, consisting of buildings and machinery, was of great value, were desirous that some force should be sent thither for their protection, and one of them had suggested that a small war steamer drawing not more than 12½ feet water should be employed for that purpose.

The *Bulldog* drew more than this, but she was otherwise available, and her commander had been tried and not found wanting in similar service. She was now despatched to Marsala, and arrived there on 26th of March. Besides affording the general protection of the man-of-war's presence, Key was authorised to act with regard to British residents and political refugees as in the case of Palermo, but he was also directed to obtain a correct list of the numbers of British residents at Marsala, and the extent of their property which could not be easily removed in case of necessity. He was to return to join the flag as soon as he could quit Marsala without subjecting the residents to danger, and was to examine the anchorage and the capability of the Mole for sheltering a small steamer.

A few hours after his arrival, Key sent the following letter by courier to Sir William Parker—

> "Owing to a strong head wind and sea we were unable to reach Marsala before dark on the 25th. I therefore hove-to off Farignemo until daylight, and anchored at Marsala at 7 p.m. to-day.
>
> "The alarm which appears to have existed amongst the British merchants I find was caused by a disturbance which took place on Monday last, the objects of which were the release of four prisoners who were confined for robbing a convent, and the change of some objectionable members of the committee.
>
> "Both of these purposes were effected by the "paid guard," joined by some of the lower orders of the town and country people; not a shot was fired. They surrounded the Town Hall, and, after declaring the committee dissolved, proceeded instantly to elect new members, who appear not only more popular but more respectable than their predecessors. The P.H.R. was re-D.Q.K., which, combined with other circumstances, places it nearly beyond doubt that he was D.Y.K. the change of D.Q.K.[1] The National Guard did not make their appearance, nor have they since, though they *exist* to the number of 200 or 300; but they are unorganised, unofficered, and their arms are private.

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[1] The meaning of these letters, taken from the vocabulary signal-book of the day, is lost, as no copy of it is to be found.

"On the occasion of this disturbance, many of the Marsalese came forward with subscriptions that they had before withheld; the money thus collected is used by the committee in paying the Guard (which appears to correspond to Scordato's troops at Palermo) and labourers for repairing the roads, etc. This Guard, which is *the existing power*, consists of 60 men; and on the 20th about 30 of the mob joined them. They have committed no excesses, and but one man is known to have been stabbed. Since the 20th they have not appeared except to preserve order in the town; and though the security of such Guards must be rather doubtful, yet, as long as they are paid regularly, the merchants consider there is nothing to fear. The wine establishments of our merchants, of which there are four, are close to the beach at a short distance from the town, distinct from each other, and each surrounded by a wall. The valuable part of their property being Marsala wine, which the Marsalese will not touch, they have no alarm for the safety of that. As regards their persons, the usual feeling towards the English exists here, increased by the fact of their employing large numbers of the working classes, with whom they are very popular.

"I have obtained lists of the British residents and property at Marsala and Mazarra; at Trapani there are more.

"I have also copied a plan of the port, and corrected it by our own observations."

There being thus nothing to detain the *Bulldog* at Marsala, she was back again at Palermo on the 28th, when Key sent in a further report—

"On Sunday afternoon I despatched a courier with an account of the present position of affairs at Marsala, since which all I have seen confirms what I therein stated. On Monday morning I went to the committee and told them what I naturally supposed they were aware of, that they were responsible for the safety of the British residents, and that I reminded them of it, not as showing a want of confidence in them, but with the hope that it would be an additional reason for them to exert themselves to maintain order. The points which appear to me to require immediate attention are—the formation of the National Guard, a means of raising money for their present use, and measures to be taken for supplying the town with a sufficient quantity of wheat. Considering that by drawing the attention of the committee to these points I should best secure the interests of the British merchants, whose property I was sent to protect, and which property could not be removed if danger should be apprehended, I urged them, on the plea of their responsibility, to take steps for the adoption of the measures above mentioned. For the first, they called out the National Guard and marched them round the town with music, etc. I saw them armed, 78 in number. For the second, they propose a small and equitable tax on the natives, besides obtaining the promise of several voluntary contributions. For the third, they have sent inland, and have taken up vessels to send to Malta for wheat. The President appears to be against these measures; the rest of the committee are anxious for them, but are miserably indolent. The President is, of course, obliged to adopt the opinion of the majority. If they succeed he will, I think, resign, which is much to be wished for by all, his only support being the 'paid guard,' who at present can carry everything with a strong hand.

"On the evening of Monday, 27th, a message came from the towns of Trapani and Salemi, to the effect that, 'Hearing the National Guard in Marsala had ceased to act, they offered to send Guards from their towns to assist in maintaining order should the Marsalese require it.' This offer will, I think, be accepted from Salemi.

"On a better examination of the port by Mr. Ball, the master of this sloop, he reports that no vessel drawing more than 9 feet would be safe to anchor inside."

The *Bulldog's* next service was conveying Lord Mount-Edgcumbe and family to Civita Vecchia; this passage in a man-of-war being offered to him as some return for his great services as an intermediary during the disturbances at Palermo.

The King of Naples had meanwhile positively rejected the Sicilian ultimatum, and Lord Minto gave up all idea of further intervention for the present; the squadron sailed for Naples, arriving there on the 2nd of April. *Bulldog* anchored at Bahia Bay—so as not to contravene the terms of the treaty regarding the number of ships which might anchor off Naples—on the 4th. Next day she sailed over to Castel-a-Mare, and on the 9th joined Sir William Parker's squadron, now under way for Malta, although, as Sir William Parker wrote on the 3rd of March—

"The rapid succession of events in this quarter seldom gives me a moment's repose, and we are again astounded by the intelligence just received from Naples of the insurrection in Austria, and the threatened movements in Lombardy, Sardinia," etc.

Bulldog called in at Palermo with despatches, and then followed to Malta, arriving there on the 12th, and finding present the whole fleet, consisting of the *Hibernia* (flag), *Queen*, *Trafalgar*, *Rodney*, *Vanguard*, *Superb*, and *Vengeance*—all sailing line-of-battle ships—with the steamers *Terrible*, *Volcano*, and *Oberon*.

But there was no rest for the sole of Key's feet in these times. The admiral was obliged to keep vessels localised, as it were, at the different Sicilian ports, to watch over British interests in a country where things were everywhere going from bad to worse. The sailing brig *Harlequin* was at Syracuse, the sailing frigate *Thetis* at Messina, and the steam ship *Gladiator* at Palermo. These ships all required constant recruitment and supply, and their presence was more than ever called for since the Sicilian Parliament at Palermo, 13th of April, had voted the deposition of King Ferdinand and his dynasty, the decree being signed by the presidents of both chambers and by Don Ruggiero Settimo as the president of the kingdom. Marsala, too, was again in a state of agitation. The merchants wrote on the 2nd of April, thanking the admiral for the "efficient protection" afforded by the *Bulldog*, but regretting that the effects were now wearing off, that they could not hope that local order would be preserved, and asking again for the presence of a warship.

In the result *Bulldog* was off again on the 15th of April to Syracuse, Messina, Palermo, and Marsala,—to the three first-named places to convey orders and supplies to our ships, as well as to gain information as to political affairs; and to the last, to endeavour to secure the safety and calm the fears of the British merchants, while informing them that there was no steamer available to be stationed at their port.

Bulldog was back at Malta on the 19th, and reported the news of the acts of the Sicilian Parliament, which was heard at Messina, but no other grave political intelligence. As to Marsala, he found confidence restored in consequence of the change of president. The new man,

> "Don Marie Milo, had completely reorganised the National Guard, and had succeeded entirely in restoring tranquillity to the town and its environs. The farmers and country people had made a firm stand against the robbers who have lately pillaged the country, and they were fast disappearing. The vice-consul and British merchants stated that for the last fortnight they had felt themselves in perfect security, and considered Marsala at that moment as less liable to disturbance than any town in Sicily."

It had been a sort of reward held out to the wearied and now somewhat worn *Bulldog*, that at the conclusion of this last cruise there should be a rest. Sir Wm. Parker had said that on her return from Marsala she would "require three weeks to put her tubular boilers in order." She now had this rest until the middle of June.

Single words are often potent in meaning, even when they drop from the pen almost inadvertently; and the admiral's word "tubular" denotes Key's ever-fast connection with material progress. The tubular boiler was then, in fact, a new development, which has since overspread the whole field of steam machinery, and only now shows signs of yielding to other plans.

The remarkable change in the personnel of the engine-room complements since these days comes into note at this period.

Key reports in May, that

> "One second-class and two third-class engineers having been appointed to this steam sloop in March 1847, to be borne as part complement, in addition to the four engineers usually borne by sloops of this class, I beg to request that you will be pleased to sanction the erection of cabins for their accommodation in such places as may be found suitable without inconvenience to the service."

It has been constantly pointed out that when we do not find Key's mind working in the direction of the material progress of the navy, it is merely that other more pressing ideas are wholly occupying it, and that the tendency is dormant. So soon, then, as the *Bulldog* gets fairly into dockyard hands at Malta, we find his mind back in its normal groove, and busy with suggestions for the improvement of his ship.

The coal capacity of H.M. steamers was just about as burning a question in 1848 as it was for long after, and Key, in his continual full-speed passages and eternal coalings afterwards, could not but draw conclusions favourable to the increase of coal supply. The *Bulldog* measured 1124 tons (about 1555 tons displacement), and she was calculated to stow 300 tons of coal, her full speed being estimated at 10.4 knots. The great feature of the *Sidon*—constantly in company with the *Bulldog*—was her proportionate coal capacity. She measured only 205 tons more than the *Bulldog* (about 1840 tons displacement), but she carried 626 tons of coal. So we find Key writing to request that alterations made by his predecessor in the stokeholds, which were intended to, but did not, improve the ventilation, and yet curtailed the coal stowage by fifteen tons, should be withdrawn and the extra stowage of coal gained.

And then the boilers: the new-fashioned "tubular" boilers, which were so much the object of Sir Wm. Parker's solicitude. The *Bulldog's* repairs—chiefly replacing tubes in the boilers—were estimated to take twenty-one days to complete. But when the examination began, it was found that the method of securing the "stays" of the boilers was so defective that 452 had to be replaced and re-secured, necessitating the lifting of the boilers and the removal of the funnel, and occupying fifty-four days before the defects were made good.

Key thereupon writes a lucid letter, with diagrams, explaining the nature of the disease and the remedy, which no doubt became the basis of the future method of boiler-making.

Just before Key's arrival at Malta, and his ship being so dismantled, he had written of her as "a yacht," which is the highest form of approval known to the naval vocabulary, and his heart was set on a full-speed race between the *Terrible* and his own ship, in which he hoped for victory, though the estimated speed of the *Terrible* was 12.8, while that of the *Bulldog* was only 10.4.

The state of Europe was such, and the arrogance of the new French Republic promised to be such, as to make a great war inevitable. The whole navy looked for it with enthusiasm, and no one with more delighted forecast than Commander Key—

> "What do you think of our chance of a war?" he writes; "I think it inevitable in the course of a year. I should like to get my promotion first. People tell me I have a good chance of it, but I can't see any."

This thought of promotion followed on the fact that on the 3rd of May he had concluded that year's command of a sea-going ship, which made him eligible for captain's rank if it should come into the hearts of the powers at Whitehall to grant it to him. His hopes were founded on his war services in the Paranà River subsequent to the battle of Obligado, and on his certainty that under Sir Wm. Parker's command he had attained all the distinction which had been open to him under the circumstances.[1] And at this time promotions were so numerous, and so free from artificial trammel, that Key's hopes were by no means unreasonable. There rested in the hands of the Admiralty an ability to advance the best men with a free hand, which they have long since parted with,—whether for the weal or the woe of the navy remains yet to be seen.

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[1] He was sure also of what in those days was powerful support—the good word of Lord Minto and Lord Mount-Edgcumbe.

But there was a terrible spur at this time urging on Key's hopes. He had spoken of the fatality of Malta to the young naval bachelor, without apprehending that to one so warmly affectionate as himself escape was unlikely. And the terrible spur now was that his affections were strongly engaged, while the circumstances made fruition almost impossible. Yet the spur acted, and on the 15th of May he wrote—

> "I have just done rather a cool thing: written to Lord Auckland (the First Lord of the Admiralty) to ask him for my promotion, telling him that I want it very much, and therefore I hope he will give it me. But the truth is, that promotion to me at this moment would be everything. I should be ready for the coming war, which *I* think inevitable, and for which I want to command the *Dauntless*.[1] And then I feel I might succeed in placing myself in a position to obtain that which is uppermost in my thoughts, and to gain which I would willingly sacrifice everything in the world but my dear home."

Meantime things in the Mediterranean world showed no signs of a return to normal conditions. There was war between Sardinia and Austria, in which the Pope had been forced by the populace to join. The Grand Duke of Parma had abdicated, fled, and put himself under British protection, and the Pope's own flight with the same object was anticipated. A bloody but abortive insurrection had taken place at Naples on the 15th of May. Sicily remained—all but the fort at Messina—absolutely in the hands of the insurgents. There had been in places, especially at Palermo, great disorganisation and excesses, and an almost constant battle between the town and the fort at Messina, to which was added the guns on the Calabrian side of the Faro. The interference of the French Republican Government through its fleet, and also of the United States, complicated matters, and seemed to put the end farther off. But no vigorous effort was made by the King's Government for the recovery of the island, and British trade remained hampered by want of regular communications.

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[1] Still bent on that which was foremost and newest. The *Dauntless* was a new pattern screw corvette then at Glasgow, and of which great things were hoped.

Bulldog being ready for sea on the 15th of June, she sailed from Malta under orders to go to Palermo, to receive the merchants' correspondence and specie for conveyance to Naples, there to supply the *Thetis* with provisions, and then to return to Palermo, relieving the *Hecate* in the duty of protecting British interests, in the still unsettled state of affairs.

In a letter dated 24th June, Key describes the situation—

"Here we are again at Palermo; but what a change! The people are as gay and lively as if they had never had anything to trouble them; and, in fact, their affairs are looking very promising. They have long discussions in the chambers about their constitution, and the powers they intend to grant their King—when they find him. But in the meantime their National Guard is in good condition, their taxes are coming in, their navy growing up, and everything gives the appearance of order and content. English influence still carries the day, and a word of advice from us will do anything. How glorious is the title of 'Englishman,'—and yet we are not loved. How is it? Is it our national conceit; our self-confidence and supercilious bearing—the consciousness of superiority that we show? Or is it jealousy? It is gratifying to think the latter, but I fear it cannot be that altogether.

"I am likely to remain at Palermo about a month or more, perfectly alone. I look forward to it with real pleasure, after the whirl I have been living in. . . .

"What would I give for my promotion at this moment! I have received the usual official answer to my memorial to Lord Auckland, 'that it has been received, and my claims (?) will be taken into consideration.' So I must give up all thoughts of it until *Bulldog* is paid off. Meanwhile I am very happy in my ship. She is in fair order, and everybody, I believe, comfortable. I have lately had a third lieutenant appointed—Hobart[1]—connected with the Halseys. . . .

"Now I am my own master at Palermo, I keep regular and early hours. To bed at half-past ten, up at six, and go on shore to bathe in the most picturesque little grotto that can be imagined. It is a bathing-place fit for a queen. I will try to sketch it for you some morning. . . .

"The accounts of the insurrection at Naples were very much exaggerated. Some dreadful atrocities were committed by the troops after the disturbance was quelled, but it was soon over. All is now *apparently* quiet. The chambers meet on 1st July, and after that, I think, a revolution may be daily expected. The King deems his crown safe,—I think it is not worth two months' purchase at the most. I am in constant communication with Lord Napier at Naples, who tells me of all his interviews with H.M. and correspondence with Lord Palmerston, so as to keep me *au fait*. Will a European war spring out of this? Yes, within six months."[1] . . .

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[1] The late Hobart Pacha.

Key was now about to exercise his discretion in the matter of an international act, which showed great decision and considerable enterprise, and might have had—as he very well knew—the most important political effects. He had had directions from his Commander-in-Chief to recognise the *de facto* Government of Sicily so far as to return salutes made to him under the Sicilian flag, but he was without orders as to offering salutes himself; and, though he was informally acquainted with the favourable views towards the independence of Sicily entertained by the Queen's Government, he had no authority to give currency to those views by any overt act.

But, on the 10th of July, the Sicilian Parliament decided to offer the crown of Sicily to the Duke of Genoa. On the 11th, Key took on himself, as the representative of Great Britain, to approve of the act by offering a royal salute to the Sicilian flag. Having so committed England, he had the address to commit France, by inducing the captain of the French 90-gun ship *Inflexible*—Captain Guyet—to follow his example. The smoke of the guns had scarce time to clear away, before Sir William Parker with his four sail-of-the-line and steamer *Hecate* put in an appearance. This young commander was, however, master of the situation, and in sporting phrase "had forced the running." Sir William must either repudiate the act of his subordinate, and so express a disapproval of the Sicilian choice, which did not in fact exist, or else he must follow his subordinate's lead. There was no alternative, and the British flagship saluted the Sicilian flag with twenty-one guns at eight o'clock the next morning.

Key's official account of his proceeding, which was accepted, read as follows:—

"I have the honour to inform you that I have this morning received an official communication from the Sicilian Government, through H.M. Consul, to the effect that the Duke of Genoa had been unanimously chosen by the Parliament to fill the throne of Sicily.

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[1] All the captains of ships now in Italian or Sicilian waters had orders to keep themselves in thorough cognisance of political movements, and Lord Auckland, referring to their action, wrote: "It is gratifying to see with what discretion our officers almost invariably perform the diplomatic duties which devolve upon them."

"Being aware of the expressed intention of Her Majesty's Government to recognise this kingdom when any member of the reigning Italian House should be called to the throne; and also that the King of Sardinia had expressed his readiness to accept it for his son, if selected:—

"I deemed it my duty to publish this recognition without delay by saluting the Sicilian flag with twenty-one guns at 8 a.m., which was returned by the castle."

What Sir William Parker thought of this energetic and decisive junior commander for thus forcing his hand is not on record. The admiral said nothing to Key himself, and only admitted to Lord Auckland, that

"As Commander Key, with the knowledge of Lord Palmerston's letter to Mr. Abercromby in May last, and of Lord Napier's views from subsequent communications, had taken the initiative in saluting the Sicilian flag, which was followed by the French ships, I deemed it best on my arrival not to require the compliment of a national salute in the first instance to us, and both the president of the Senate and members of the Government expressed themselves very grateful for it."[1]

But he must have become aware that the commander of the *Bulldog* was every whit as bold and decided as he was prudent and amiable.

Key's private account of this and other matters was given later in a letter not finished till the 31st July, when the *Bulldog* was at Naples—

"I have been lying at Palermo as senior officer, and have been much interested in the Sicilians' selection of a king. As you know, a republic never was their aim. We have used our influence to hasten a selection, as it was important to us to keep down any republican feeling, which is so prevalent in these times. A son of Charles Albert was chosen by a large majority, and I think he appears to be every way suited. Charles Albert is considered the rising star; I very much distrust him, nevertheless. His ambition may be of advantage to the Sicilians, if they only know how to make proper use of it. The morning after the king was chosen I saluted him with twenty-one guns, *thereby publicly recognising this kingdom in the name of England, without orders!* I know I have done good, but I hope I shall not be blamed by my commander-in-chief. Sir William Parker has not told me he approves; but the fleet arrived a few days after,[2] and he saluted the Sicilians with the same number of guns, which looks very like it.

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[1] "These formal and public acts of recognition of the Sicilian flag, which gave rise to an animated debate in the House of Lords, had only anticipated orders from England."—*Life of Sir William Parker*, iii. 349.

[2] It was the same day.

"There is now a row at Naples; the King has been levying contributions on the British merchants against the treaty, and our admiral is very irate. We were all lying comfortably at Palermo with the French fleet—with which we have been fraternising to an immense extent—when the signal was made to weigh; and as *Odin* has broken her machinery, I am again in luck, and proceed with the admiral, leaving *Odin* at Palermo. We are now on our way.

"The *Howe* joined us yesterday from England and Malta. She brought me a book from Burrows, and a letter—later than any I have had from you—*The Life of Mrs. Godolphin*. He showed it to you, he says.

"My old friend Trèhouart[1] is rear-admiral of the French fleet. I saw a great deal of him. He was very cordial. It is astonishing how disgusted all the French navy are with the late doings in France. They are all warmly in favour of Louis Philippe—and say so! They say the republicans make them ashamed of their country.

"As you may imagine, I am very anxious to know if the recognition of this Sicily is approved of by Lord Palmerston. . . .

"I would give much—very much—for my promotion just now, but of that there is no chance.

"*July* 31*st*.—We arrived at Naples two days ago, and as we anchored the fleet in line before the town, H.M. of the two Sicilies (as he still styles himself) soon came to terms, humbly apologised for all his misdeeds, and offered us boxes at the opera. We then saluted him, and all was over."

At Naples the *Bulldog* lay until the 21st August, then weighing to enable Key to proceed on what he well calls "the most important and delicate secret mission . . . that had fallen to the lot of a naval officer for some years." A certain dramatic melancholy hangs over this moment of his life, noticed by himself in saying that "as to-morrow will see the most important act of my public life, so is this letter the most important of my private life."

The attachment already spoken of was, in short, now to be declared, and request made to his parents to assist in bringing it to an issue—a request which could not be met, and never was met. The nature of what was said it is not necessary to repeat, but readers of Nelson's earlier letters can easily put their hands on parallel passages.[2]

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[1] He was the officer who commanded the French squadron at Obligado.

[2] A whimsical antithesis to the seriousness of Key's position, public and private at the moment, is worth noting, as showing the many-sidedness of the naval officer's work, and the pitfalls that surround his career. Key had just received a letter from the accountant-general of the navy, telling him that the bills he had drawn on Government account were charged against his pay, and that all future bills arriving with his signature would be similarly treated, because his purser's accounts had not been received in office. The accountant-general "begged to request that he would have the goodness to explain why he had not compelled

The mission Key had now embarked upon was the following. The state of Rome had been growing more and more critical. All the Pope's benevolent intentions had miscarried. He had added his yeast to the political wort, in the hopes that the ensuing fermentation would be of the right kind, and that, in the battle of germs to follow, those capable of pressing it on to the vinegar stage would be beaten. But it was all a miscalculation, and the fermentation went on to putridity.

Sir William, on the 21st of August, had received from the Governor of Malta, the Right Hon. More O'Ferrall, a letter enclosing one from Dr. Nicholson, the Roman Catholic Archbishop of Corfu, who was then at Rome, and in close and confidential communication with the Pope. This letter represented that "not only did His Holiness and his people require protection from a violent, though small, faction, but British subjects stood in need of it. One of the priests of the English mission, the Rev. Mr. Hearne, was stabbed in the most public street of Rome about nine o'clock on the Thursday night previous." The object of the letter was to get an English ship of war at Civita Vecchia as soon as possible. The Pope could not himself make such a request, but it was clear that it really came from him. It was also clear what was to be read between the lines, and what had indeed been for some little time apprehended, namely, that preparation for the sudden flight of the Pope was necessary.

Accordingly, Commander Key received public orders to the effect that the political agitation at Rome might affect the safety of the persons and property of Her Majesty's subjects there, and that he was to take the *Bulldog* without loss of time to Civita Vecchia for the purpose of affording them due protection. But secret orders, enclosing to him extracts from Dr. Nicholson's letter, informed him that

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the purser to send home his accounts?" to which there was nothing to be said but that the purser ought to have sent them in, and had neglected to do so. This custom of whipping up captains of H.M. ships by charging the pecuniary laches of their subordinates against them personally has very ancient roots, and is not, I believe, even now extinct.

news had just been received at Naples that commotions had actually commenced at Rome. He was told—

> "You will gather from this the desire that Her Majesty's steam vessel should reach Civita Vecchia as soon as possible, and, in the event of the Pope wishing to take refuge on board her, you will receive His Holiness with all the attention you can show him, and place the *Bulldog* at his disposal for his conveyance to any part of the Mediterranean station. . . .
>
> "Mr. Petre,[1] I believe, holds a demi-official diplomatic position at Rome, and I know not on what footing he may stand with Mr. Freeborne[2] and Dr. Nicholson respectively; but it will perhaps be advisable for you to communicate with them separately, and be cautious in your observations that you do not excite expectations which it may be difficult to realise."

Key reached Civita Vecchia on the afternoon of the 22nd of August, and at once proceeded to Rome. On communicating with Mr. Freeborne and Mr. Petre, he found that, though tranquillity was in a precarious state, there was no occasion to expect any immediate disturbance. Therefore, after making himself master of the situation, he returned to the admiral at Naples on the 28th, and then made the following report—

> "With reference to your confidential letter of 21st August, I have the honour to inform you that, after having ascertained the posture of affairs as known publicly by Mr. Petre and Mr. Freeborne; and perceiving that Mr. Petre had no knowledge of any wish having been expressed by the Pope for the appearance of an English ship of war, and did not think such a request probable, I did not feel myself at liberty to inform him. I called the next day on Dr. Nicholson (Archbishop of Corfu), and told him of my arrival and its purpose. He said how delighted His Holiness would be; that he would acquaint him with it through his confidential secretary as early as possible; that at present there was no fear of personal danger to the Pope or those round him, but he knew the anxiety of His Holiness to have the countenance of a British ship of war.
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> "The next morning I saw—at his own request—the confidential secretary, Monsignore Cobboli Russi, who told me His Holiness had desired him to present me to him at a private audience that evening.
>
> "I then acquainted Mr. Petre that you had desired me to ascertain if there was a probability of the Pope being in personal danger, and to offer a refuge in *Bulldog*, and that, hearing of my inquiry through his secretary, he had sent to see me privately.
>
> "On Friday evening I was presented to H.H., and communicated to him your instruction to me in nearly the following words,—the substance of it I had before told to his secretary and to Dr. Nicholson :—
>
> "'I trust H.H. will perceive how highly Sir William Parker appreciates the confidence that has been placed in him, by sending so immediately a vessel of war

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[1] The Hon. Wm. Petre.

[2] H.M.'s consular agent at Rome.

on hearing that it was H.H.'s wish—although at this moment the disturbed state of Europe requires so many ships to be detached at different points for the protection of British subjects.

"'Sir William Parker sent the *Bulldog*, with the idea that the personal safety of H.H.—of such importance to the peace of Europe—was in danger, and that he might afford him a refuge. But as I perceived from the existing state of Rome, and had been informed by his secretary, that no immediate danger was to be apprehended, I considered it my duty, if H.H. would acquaint me with his wishes, to return with them to Sir William Parker, trusting that the appearance of the *Bulldog* might already have had a beneficial effect by showing the cordiality existing between the two Governments. If at any time H.H. may feel that the presence of a British ship of war would be of immediate service to him, and would notify the same to Sir William Parker in any manner H.H. might think proper, though I am not acquainted with the commander-in-chief's instructions, yet from his high regard for the person of H.H. I feel sure that Sir William Parker will meet his views as far as is consistent with those instructions.'

"H.H. then said that he desired me to express his gratitude and thanks most warmly to Sir William Parker for sending the *Bulldog*. Her arrival at Civita Vecchia will of itself have a beneficial effect, and if a vessel of war could now and then look into Civita Vecchia it would give H.H. very great confidence, and tend in a high degree to the tranquillity of Rome. H.H. has reason to expect that instructions will be sent to Sir William Parker from England for him to assist in maintaining the external and internal tranquillity of those Italian States that require assistance, and would ask the British admiral to send him information of his instructions when he receives them, if it is consistent with his duty. H.H. would feel obliged to Sir William Parker if he could send to England to ascertain whether—in case a congress should be held for the pacification of Italy—a representative from Rome would be received. H.H. then informed me that a few days ago a Sardinian steamer of war had landed at Civita Vecchia (without permission) 300 Venetian troops who had served with the Piedmontese, and then returned to Genoa. These soldiers wished to march across the Papal States to Ancona, thence to Venice, which the Pope refuses. They were fearful of going by sea, as they had twice capitulated and then broken faith by fighting again. H.H. wished to know if the admiral would assist in transporting them to Venice.

"I then replied that I would inform the commander-in-chief of all H.H. desired me; I believed he had not received the instructions H.H. had spoken of, but he knew the favourable disposition of the British Government towards H.H., and had acted accordingly. But with regard to the Venetians, I thought I could hold out no hope of the admiral giving assistance, but begged to ask if he had taken any steps with the Sardinian Government on the subject? H.H. said he had sent to Genoa to ask for their removal, and was in daily expectation of the answer. Again expressing his thanks very cordially, H.H. dismissed me.

"I could not directly ascertain the truth of the report that the French Republic was about to send 2000 troops to Rome, but I think I could see that it had been circulated by the Government for the purpose of intimidating the people.

"The reason that he did not send a request for a ship of war through Mr. Petre was that he was anxious that the people should not entertain the idea that he was asking for foreign aid, as had been said with regard to the Austrians.

"Rome, at this moment, is in a state of anarchy, though tranquil; its tranquillity being the result only of the personal regard which all classes still have for H.H. (though the prestige of his public character is lost), and a desire to see the result of the impending mediation—as the Government have not the shadow of power. The question at issue appears to be still, whether they shall, or shall not, assist with arms in the expulsion of the Austrians from Lombardy. The radicals wish to oblige the Pope to prepare an army of 20,000 men as a defensive army (as they term it), notwithstanding the embarrassed state of the finances. But, as they are expecting that the Austrian expulsion is only *delayed*, and that if the mediating Powers do not succeed in detaching Lombardy from Austria the Italians will again march against them, this army is no doubt intended to aid.

"The Pope thinks he has no occasion to drain the country for this purpose; certainly not for offensive measures; and as for his own defence, he trusts to his weakness, and the uprightness of his motives, for protection.

"The leaders of the popular party are Mamiani, an ex-minister in the Chamber of Deputies, and Cicero Acchio, a well-known popular demagogue of the lowest class, who has much influence with that class. The 'Vicenza heroes,' who at present retain forcible possession of the Jesuit College, are waiting to take a prominent part.

"Another guarantee for the continued tranquillity of Rome is the well-ascertained cowardice of the people. The utmost, then, that is at this moment to be feared, is a local popular tumult for the purpose of plunder; or a reaction in favour of the Pope, and an attack on the clubs in consequence. A re-organisation of the National Guard is in contemplation, for the purpose of dismissing those whose position does not give them an interest in the tranquillity of the State. England appears to be in high favour with all parties."[1]

But if there was to be, for the time, quiet at Rome, and rest for the commander of the *Bulldog* in that direction, there was to be none in Sicily. The Duke of Genoa had refused the crown, and the preparations by the Neapolitan Government for forcibly recovering the island had proceeded steadily. Two days after Key's arrival, 1 frigate, 9 war steamers, and 4500 troops quitted Naples to commence the attack. It was not at first known at what point the operations would begin, but Sir William Parker sent the *Porcupine* to warn Captain Robb in the *Gladiator* at Messina, and Captain Pelham in the *Odin* at Palermo, as well as our Consuls, and therefore to warn the whole island.

The first attack was directed upon Messina: 1500 men were thrown into the fort, still held by the Neapolitan Government, and 2000 men were landed elsewhere. A vigorous bombardment of the town by fort, ships, and troops, at once, began upon the 3rd of September, and was continued. The whole of the British residents sought refuge on board the *Gladiator*, and on the 4th, Commander Key, in the *Bulldog*, was ordered to assist Captain Robb in the duty of protecting British interests.

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[1] Sir William Parker's comment on Key's proceedings was: "He appears to have acquitted himself very judiciously, and has given a very good account of the present state of Rome."

Bulldog spent a few hours only at Messina, and then was sent to Palermo to be back again at Messina just after noon on the 7th, and was at once crowded with refugees; forecasting the speedy fall of Messina. The night of the 7th was an awful one for the unfortunate Sicilians. By sunset the town was on fire; the batteries on the Calabrian side joined in the din of the general bombardment, and just before midnight three heavy explosions took place in the town itself.[1] Terms were arranged between the contending leaders through the mediation of the French and English commanders of the ships of war, and Messina capitulated to the King.

The *Bulldog* remained at Messina till the 1st of September, and then carried her unfortunate refugees to Catania, when they were landed in a temporary security destined to be disturbed by later and, if possible, greater horrors. *Bulldog* was then back with all speed to Messina, then to Malta, where she arrived on the 13th. She coaled, watered,[2] and provisioned, and took in stores for the whole squadron at Naples. Then, after much bustle, she was back again at Catania and Messina, and reached Naples on the 18th, where her proceedings were stayed for the present.

About this time Key writes—

> "I have barely time to write a line, but as a French vessel is going to Marseilles I will tell you that I am at Messina. The Neapolitans have sent 2000 troops and retaken it. We have been giving succour where we can, and have been crowded with poor starving refugees for some days. I do not think the King will recover Sicily. Palermo will break him; but these Sicilians are

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[1] According to Sir A. Phillimore, the whole of this destruction was in violation of an engagement to cease firing.—*Life of Sir William Parker*, iii. 378.

[2] It must be noted that now, and for years afterwards, "watering" was, even for steam vessels, a matter of precisely the same moment and importance as Key had found it in the *Russell* when he first went to sea.

only a few removes from the Neapolitans; they are great cowards when danger is nigh. . . .

"Europe is run mad. I think France and Austria will fall out.

"Such ruining and bloodshed as we are witnesses to here make one's heart bleed.

"Why do you wish the Sicilian flag hauled down after I have been working night and day to get it hoisted, and at last risked my commission by saluting it without orders?—and, what is more, I persuaded a French commodore with two line-of-battle ships to do the same four hours afterwards. My salute was approved of, and the consequence is that when Ferdinand is on the point of recovering the island—which I believe he could do—England and France say 'No.' He has retaken Messina, and there he must stop, while we mediate and get abused by both parties for our pains. Italy is in a precious mess. Flaring up from one end to the other. We helped to light the fire, and I should not be surprised if we burnt our fingers in trying to extinguish it.

"I had a most interesting mission to His Holiness the other day; was five days at Rome, saw a good deal of him privately. I have just been to Malta to coal, and am now on my way to the admiral at Naples. . . .

"You want to know about our 'evolutions'; I really have little to interest you on that subject. We get the ashes up at the end of every watch, and poke the fire in proportion to my impatience. The result of this scientific arrangement is, that we have beaten everything we have yet seen.

"My *Bulldog* is allowed by everybody—French, English, and all—to be *the* handsomest steamer in the world. . . .

"You cannot wish for my promotion more than I do."

Then from Naples, under date, 28th September 1848—

"Owing to a suspicion of cholera at Malta (which is all nonsense), they have put me in quarantine here, much to the admiral's disgust, and mine also. Not only that, but they will not admit me in any case. The admiral is going to send me wildly about the world to seek admittance where I can. It is very annoying to be avoided in this way like a pest. This wretch of a king owes the *Bulldog* a spite for the many *good* turns we have done him, and he takes this opportunity of revenge."

As early as the 6th of September, Sir William Parker had been writing in some sort of regret at the absence of the *Bulldog*, as if his dependence on her in times of trouble and difficulty were something special—

"I shall be glad to know," he writes to Captain Robb at Messina, "the facts of the past, and the prospects of future operations, and to have back *Bulldog* as soon as she can be spared; for I have just received accounts from Codrington, dated the 4th, of an insurrection at Leghorn, by which the mob and republicans have worsted the forts and strong positions from the dastardly authorities, and they have proclaimed a republic."

But *Bulldog*, as we have seen, could not be spared, and another steam vessel was sent. Later, that is, on the

3rd of November, she went to Leghorn, and met on her way a furious gale while she was under sail alone. She lost sails, spars, a boat, and washed away much gear. Contending thus for seven hours off the north-west point of Elba, she finally struck her lower yards and topmasts and pushed into Leghorn Roads under steam alone, dropping both anchors for her greater security.

Meantime at Rome the troubles augmented and came to a head. On the 15th of November the Pope's prime minister, Count Rossi, was assassinated, and Sir William Parker at once sent orders to the *Bulldog* to proceed to Civita Vecchia.[1]

Key's public orders directed him to proceed to Civita Vecchia, "for the purpose of affording such protection and refuge to Her Majesty's subjects at Rome or in that vicinity as might be in his power," and he had authority to repair in person to Rome to confer with the Hon. Mr. Petre and H.M. consular agent. But he had the following secret orders—

> "In the event of the commotions at Rome placing the person of the Pope in jeopardy, and of exciting a determination in His Holiness to quit the Papal States, you will be ready to receive him on board H.M. steam vessel under your command, for conveyance to any port to which he may desire to retire, in conformity with my secret instructions to yourself of the 21st of August 1848, when the *Bulldog* was last sent to Civita Vecchia.
>
> "Dr. Nicholson is now here (at Naples), but he informs me that the Very Reverend Monsignore Cobboli Russi will be the best person for you to communicate with, for the purpose of ascertaining the wishes of the Pope, but I sincerely hope His Holiness may not deem it necessary to quit his territory.
>
> "In any transactions of this nature, you will be governed by the instructions given to you in the former case."

Bulldog arrived at Civita Vecchia on the 23rd of November, and a strong breeze springing up with swell from the south-east, showed that even the *Bulldog* was a trifle too large for the harbour. She struck her rudder on the ground and broke her tiller, but happily there was no more damage, so Key was able to proceed to Rome next morning. *Bulldog* returned to Naples on the 1st December, and Key made the following report to the admiral—

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[1] "As she is the only steamer of force," wrote Sir William Parker to Mr. Petre, "at my disposal that can be got within the breakwater at Civita Vecchia."—*Life of Sir William Parker*, iii. 430.

"According to your instructions on November 24th, the morning after my arrival at Civita Vecchia I proceeded to Rome to ascertain the turn affairs would probably take under the direction of the new ministry.

"The same evening I had an interview with Mr Temple.[1] He informed me that he had that afternoon seen the Pope, who had then said 'that he could not now consider himself a free agent, but that he felt he was in the hands of Providence, and he would calmly await the result' (alluding to the assassination of Rossi and the subsequent disturbances). From this I concluded that His Holiness had no present desire to quit Rome; but I intended the next morning to have communicated the arrival of the *Bulldog* to him through his private secretary. At noon on the 25th it was known generally in Rome, and confirmed from the Quirinal, that His Holiness had left the palace during the night, and had proceeded, it was believed, in the direction of Civita Vecchia.

"The details of his flight, as far as could be ascertained at Rome, are these: —The French ambassador called at the Quirinal in a close carriage early in the evening, and about 10 left the palace with His Holiness, without exciting the suspicion of the civic guard, who have been on duty at the palace since the departure of the Swiss. They proceeded in the direction of Civita Vecchia, where the Duc d'Harcourt arrived before daylight, and went on board the French steamer *Tenare*.[2] She then weighed and steamed about five miles to the southward off Santa Maranella, where it is supposed that the Pope embarked. The *Tenare* then proceeded to Gaeta.

"Various reasons are given for the Pope's departure. A large party attribute it to the influence of the French and Spanish ambassadors to serve their own ends, but they cannot give any plausible reason for the assertion. Others say it has taken place at the instigation of the King of Naples; it being his object to prevent the Pope from appearing to lead or to countenance the still progressing march of liberalism. Very few openly avowed what the consciences of the majority must tell them is the true cause, viz., the ingratitude of a cowardly and short-sighted people to a liberal-minded but weak prince. The Pope felt himself no longer a free agent; a ministry were acting as if sanctioned by him, against whose formation he had protested in the presence of the Diplomatic Corps, and had declared that any use made of his name by them was illegal. In this ministry Count Mamiani refused to accept office unless the Pope would sign a certain programme of a system on which they were to act. This contained many projects which the Pope could not conscientiously sanction; had he refused, the people, in support of their favourite minister, would have repeated their demonstrations before the palace, and the Pope—deprived even of his Swiss guards, in fact guarded by the very people who would threaten him—would be obliged to yield; and this would be repeated at every step.

"His Holiness therefore considered that by retiring from the capital he would effectually deprive them of the appearance of legality which his presence would afford to measures of which his conscience could not approve. He may consider also that by his withdrawal, thus leaving the ground to the adverse party, he almost entirely precludes the possibility of a civil war; and that, by leaving them to their own devices, he hastens the moment when their eyes will be opened to their folly, and unjustifiable treatment of their lawful sovereign.

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[1] Hon. W. Temple, who had passed through Civita Vecchia on his way to Rome the day before.

[2] The *Tenare* was a 4-gun paddle aviso launched in 1840.

"In the course of the afternoon of the 25th several proclamations appeared from the ministry, the chambers, and the Circolo Romano (the Democratic Club), their tendency being to impress on the people and the Diplomatic Corps that the Government existed in the same form, and by the same legal authority, as before the Pope's departure. The ministry seemed to lay great stress on the Pope's autograph letter to the head of his household, in which (if it is correctly published) he recognises them as a ministry and recommends to their care his household, his palaces, and the tranquillity of the city. From the importance they attach to this, it may be received as an acknowledgment that they felt that he had not done so before. However, the proclamations had a very beneficial effect, as the tranquillity of the city was in no instance disturbed.

"Count Mamiani accepted office as minister of foreign affairs; the chambers declared themselves sitting in permanence, and appointed a commission to punish any attempt to disturb the public peace; the civic guard was strengthened at the different quarters; all was carried on in the Pope's name; no wish to proclaim a republic, which had been talked of so much before the Pope's departure, has been since shown. The existing ministry is supported by all ranks for the present, as they are of the popular choice, and have had recourse to the usual expedients for conciliating them by giving employment to the labouring classes, and promises to the rest, both of which must soon fail for want of money and means.

"Several of the leading Roman princes have left Rome. Among them those of Borghesi, Doria, and Rospigliosi: their *excuse* is, that they cannot recognise the existing ministry; their *reason* is fear.

"During the three or four days succeeding that of the Pope's flight, no change of consequence occurred in the city. Business, which had slackened, was resumed, the populace continued quiet, the palaces were untouched, and the civic guards on duty reduced to their usual number. The discussions in the chambers were of little interest; the law of primogeniture was declared to be abolished, and an attempt made to pass a Bill for the confiscation of the property of the noblemen who had left the city. On the 28th the Government determined on the issue of treasury notes to the amount of half a million of scudi, to be raised by a mortgage on Government property. But as this would not be legal without the Pope's signature, a deputation was prepared to wait on His Holiness, to ask him to return, *or at all events to give them the money*.

"The people, asking permission of the Government, deputed a body to wait on the four cardinals who had remained in Rome, to thank them for the confidence they had placed in them, and to assure them of their safety.

"Intelligence was received from Bologna, that on hearing of the death of Rossi, and subsequent coercion of the Pope, the Bolognese had declared General Zucci dictator under the Papal Government, but refused their adhesion to the ministry selected by the Roman mob.

"It seems difficult to foresee what may ensue from the present state of the Papal Government, as it is certain that this state cannot continue.

"If left to themselves, they have two courses open to them. To declare a republic; or to recall the Pope to the capital on his own terms. The ministry and the middle classes would be against the former,—the ministry chiefly from knowing the difficulty that would arise in procuring money; the middle classes, from fear of foreign intervention.

"The step His Holiness has taken, by placing himself within the influence of the King of Naples, may contribute to the extension of republican feeling. Of this, Prince Camiro, the leader of that party, is taking every advantage, and is exerting himself to forward his views among the soldiers and civic guard by means of his money and personal familiar intercourse with them.

"The other course remaining to them may be followed when, after this ministry and any other they may choose has tried and failed to satisfy them, temporary expedients are all exhausted, and when, without bloodshed (for they are undoubtedly too great cowards for that), the better feelings of the better portion of the Romans succeed in persuading the mass that their folly and blindness is leading to their own ruin.

"It is much to be feared that His Holiness and his personal adherents wish for, and expect, foreign interference; and if neither England nor France will grant it, that he will have recourse to Austria—a measure that surely would be likely to produce the worst results, not only to the Papal territory but in the whole of the north and centre of Italy, and this is a step which I should think may be rather encouraged in his present neighbourhood.

"If I might presume to pass an opinion on the Roman people, I should say that a theoretical Italian league is their sole political object, and cowardice the basis of all their actions."

In a private letter written at this time, Key says—

"I have never stood as I do at this moment, courted by everybody of all ranks and classes. Directly the dreadful assassination of the Pope's prime minister took place, the admiral, though he had six or seven ships with him, sent a steamer off to the Gulf of Spezzia—nearly 400 miles—expressly for me to come down, to go to Rome to comfort the Pope, and to endeavour to persuade him not to leave his dominions.[1] I arrived at his palace only three hours before he left, and found him completely under the influence of the French minister, the Duc d'Harcourt. He left Rome; and Mr. Temple, Lord Palmerston's brother, who happened to be in Rome *en route* for Naples (as minister), left the next day. I was then the only official representative of England in Rome. You may imagine the work I had. Rome was in a state of anarchy, but was soon tranquillised; I had, however, as much on my hands as I could well get through. You cannot imagine the effect of a British ship of war. I assure you, people wrote to the ministers at Florence and Naples, and a large number said that my presence at Rome kept the city tranquil, though my ship was fifty miles off! I remained in Rome a week, and then returned to the admiral. . . .

"The Pope remains at Gaeta, and I am only sorry that he has placed himself under the influence of the King of Naples; he could not have found a worse adviser in Europe!

"Poor Pio Nono! His sun is clouded, I think not set; but it will never shine brilliantly.

"His case shows clearly that good intentions with public men avail nothing. A line of conduct is required, not a benevolent wish. A better-hearted man—and a weaker—does not exist.

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[1] See note *ante*, p. 169.

> "The Grand Duke of Tuscany is not very stable on *his* throne at this moment. If we cannot succeed in reconciling Sicily to King Ferdinand, we leave her to her fate!"

Poor fellow! This letter of Key's is full of moans, but of resigned moans, over the adverse circumstances which prevented the families on both sides from giving him any hopes that his affections might reach their goal—

> "This letter," he writes, "is apparently hurried and unfeeling. Believe me, it is not the latter. The subject of the former part of it is in my thoughts at all times and in all places. The world here who think me so happy, and so envied, little know how much I suffer when I am alone."

The *Bulldog* did not lie long at Naples. Fresh troubles sprang up in Rome, and more persistent rumours of French military intervention came to hand. On the 11th of December, Key was back again with his ship at Civita Vecchia, and next day was at Rome. His orders were thus now become usual: to offer support and asylum to British residents, and to report on the state of affairs. On the 20th he wrote privately as follows—

> "I must write to you once more from Rome, although my time is so occupied that I have not many spare minutes. Two days after I last wrote to you, we received accounts of fresh disturbances having taken place since the Pope's departure. The republican party had strengthened, and although the ministry still carried on the government in the name of the Pope, yet they found that they must soon yield to the voice of the people, and declare a republic. The prospect of foreign intervention contributed much towards keeping all parties quiet, but as this prospect appeared daily fainter, the moderate party became less able to hold their ground. The admiral thereupon again sent me to Civita Vecchia, to proceed from thence to Rome and keep him acquainted with the real position of affairs, and in case of need to protect British subjects and property. Of danger to our countrymen there has been no cause to fear, not only from the happy manner in which we have been enabled to keep ourselves clear of being even suspected of being concerned in any of the late intrigues, but also from our being held in very wholesome respect and fear.
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> "I have, since I have been at Rome, been doing my utmost to induce the admiral to persuade the Pope to come to Civita Vecchia; there his person would be safe and his judgment unbiassed. He would be in his own dominions, and could act constitutionally as the head of the Papal Government. At present he is at Gaeta, in the Neapolitan territory, surrounded by the people who advised his flight, and who are each anxious to obtain possession of his person and to bias his opinions, to serve their own ends and those of the countries they represent. The Pope, therefore, influenced by such advisers, has refused to hold any intercourse with the existing Government in Rome. This ministry, though certainly much to blame, in the first instance, for allowing themselves to be forced on

the Pope by the people, have, since his departure, shown very great moderation and forbearance. They have succeeded in preserving the form of government intact, and have shown a disposition to conciliate the Pope, and to sacrifice much for his return. It will be said perhaps, 'No thanks to them; it is for their own interest.' Undoubtedly it is; but they deserve credit for being able to see what is for their own real interest, and for identifying their own interest with that of their country, which at this moment I believe the ministry, and the majority of the Romans, are doing.

"However, it is impossible for this state of things to continue. Either the Pope must return to a part of his own dominions, or the form of government must be changed. At present all legal business must be at a standstill, because the Pope, being recognised as the sovereign, all documents requiring his signature and sanction must either remain unexecuted or be illegally performed. The chambers have certainly appointed a 'Giunta' to fulfil the office of regent, but still it is doubtful how far that is a legally constituted authority, and people will not be very ready to accept documents of which the legality may be doubted. This can only be remedied, if the Pope still refuses to return, by declaring a republic, which, as the probability of an intervention is decreasing, I think must soon be done. The admiral has paid the Pope a ceremonial visit at Gaeta, but little took place.

"Although I cannot but praise the conduct of the Romans in the present crisis, their character I believe to be cowardly and contemptible. They are not only cowards, but they are not ashamed to own themselves such; and when a people has fallen to such a depth there is but little hope of recovery.

"*December 22nd.*—I have to-day returned to Civita Vecchia. I persuaded Lord Napier to come with me from Naples, and to accompany me to Rome, as, Mr. Temple having arrived, he is an idle man and had never seen Rome. He has been a most agreeable companion; and although our acquaintance did not open last year under very happy auspices,[1] yet we are now very great friends. He will assuredly rise to be one of our first diplomatists. He has returned to-day to Naples. I intend to spend my Christmas with my officers, and return to Rome next week. I had two or three very pressing invitations to spend my Christmas at Rome,—and indeed at the Mount-Edgcumbes I have truly a home. They are all, from the earl down to the dear baby, so truly affectionate and kind. Baby wrote me a letter the other day, her first; she is five years old, and her hand was guided,—it is so sweet! I have also very good friends in Lord and Lady Morton, and Lord Aberdour, their son. He is my morning companion in Rome. They are honest, single-minded Scotch people.

"I hope this long story about Rome will not weary you. I have said but little about the fine arts, but I think there is little in Rome that Lady Mount-Edgcumbe and I have not visited together. I spend my mornings in politics till the post goes out at 2, then we ride or drive to a gallery, church, or studio. She has very correct taste, and has much directed and improved mine. I find much more enjoyment in, and that I have a much more just appreciation of, sculpture than painting;[1] my organ of form predominates over that of colour.

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[1] I do not know what this refers to, but I imagine the occasion is alluded to by a letter of Sir William Parker to Lord Napier, of 23rd January 1848, in which he says, "I cannot help feeling rather sensitively the censure which the early part of your private letter to myself against Commander ——, who is one of the most amiable, zealous, and intelligent young officers that I have ever met with."—See *Life of Sir William Parker*, iii. 295.

"The mediation which we are attempting between Naples and Sicily proceeds very unsatisfactorily. Russia and Spain have stepped in, and strongly advise Naples to concede nothing. We shall therefore, I fear, be obliged to leave them to fight it out. Russia has also decidedly said that if France enters Italy to intervene in any way, she will do so too. This will tend, I presume, to preserve peace."

Just at this time came the climax to the question of the *Bulldog's* purser and his accounts—

"I have had a little annoyance with my purser, who, from being very dishonest, has gone mad and run away; and has written to the admiral accusing me of tyranny! Poor fellow! I am doing all I can to get him his arrears of pay, but I fear I shall fail, as his accounts are much behind; but the admiral is kindly assisting me to do so."

The two official reports on the Roman situation with which Key closed the year 1848—one dated 18th December, and the other 30th December—are of considerable interest historically, as well as in relation to the character I am endeavouring to picture, and as disclosing the extraordinary and unique position that the young officer occupied. The first report stands as follows—

"I fear there is much reason to apprehend that a change in the form of the Papal Government must soon take place.

"Since the departure of the Pope from Rome, the Romans have exhibited very great moderation and forbearance; the endeavours of the ministry have been unceasingly directed to preserve the constitutional form of government, with the Pope as their sovereign; and various attempts have been made towards reconciliation with His Holiness by letter, and by a deputation charged with a conciliatory mission requesting his return, which was not admitted to the presence of the Pope. Whether terms were proposed to which the Pope could honourably accede or not, does not alter the fact that a means was thereby offered to pave the way towards a reconciliation which was denied to the Romans.

"The form of government still continues unchanged. Therefore all acts, legal documents, issues of treasury notes, and other measures requiring the sanction and signature of the Pope, and ministers appointed by him, must either be postponed or be performed illegally. To remedy this, the chambers appointed a council, consisting of the senators of Rome and Bologna and the Gonfaloniere of Ancona, to perform the functions of their sovereign. This must, however, be but a partial remedy, as there will naturally be a disinclination to accept documents whose legality may be afterwards doubted. This cannot long continue, and

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[1] This was not his first conception. He believed, the year before, that he was more taken with painting than with sculpture.—See *ante*, p. 135.

[illegible]—the return of the Pope to his own dominions, or [illegible].

"[illegible] party—the return of the [illegible] from Venice; the arrival of General Garibaldi in Rome; the approaching [illegible] of money to pay the troops and [illegible] in the [illegible]; the [illegible] that foreign intervention will not take place; and the [illegible] with the Pope for placing himself within [illegible]. These [illegible] produce a republican movement, which [illegible] by the establishment of an uninterrupted communication between the Pope and his subjects, which cannot take place while [illegible] remains at Gaeta.

"With due deference, therefore, I conceive that those who have the honour [illegible] should in most [illegible] urge him to leave his [illegible] and proceed without delay to a part of his own dominions, where he might open [illegible] communication with the Romans. For this purpose, no place would appear to be so well suited as Civita Vecchia, where his person would be free from danger and his opinions uninfluenced.

"His Holiness is anxious to prevent anarchy and bloodshed. This step would be the surest method.

"To-day the [illegible] of [illegible] having arrived, the senator of Rome [illegible] to take upon themselves their office. It is supposed that the ministry will resign their portfolios to them, and that Mamiani will be requested to form a new ministry, from which it is probable that Sterbini will be excluded."

The report of the 27th December runs thus—

"Having received information that much excitement existed in Rome in consequence of the recent proclamation of H.H., I proceeded there to ascertain [illegible] public disturbance was likely to ensue.

"I find considerable change in the direction of popular feeling. There is now, I fear, but little probability that the Pope will ever be able to return [illegible] to his capital. The people of Rome and part of the provinces, through the [illegible] of the Popular Club, have been calling loudly for the convocation of the National Assembly. This has been seconded by part of the civic guard, the rest remaining silent. The Government have postponed the question from day to day, in the hope of making some arrangement with the Pope; this hope is now at an end. The chambers were opposed to the measure; but for several days the number required to form a House (fifty) not being present, the ministers, believing themselves called upon by the people, pleaded this as an excuse to close the chambers—not to dissolve or prorogue them, but to cause them to discontinue their daily sittings. This was done on the 26th. The Prince

"The representatives to be above 25 years of age. They will receive two scudi a day during the session. Each representative must obtain at least 500 votes. The election to be by ballot. The National Assembly to meet in Rome on February 5th.

"On the issue of this decree a salute of 101 guns was fired from St. Angelo; but it was received by the populace without any public display of satisfaction.

"There appears but little prospect of any disturbance taking place in Rome until after the meeting of the Assembly on February 5th, unless the Pope in the meantime accepts foreign aid to replace him on his throne. The Government have determined on the issue of notes to the amount of 600,000 scudi on a mortgage of national property; the notes issued on a former occasion being in general circulation.

"If, therefore, I do not receive intimation from you to continue at Civita Vecchia, I shall, in accordance with my orders, leave that port about the 5th or 6th of January, provided nothing takes place that may lead me to expect an outbreak."

CHAPTER X

THE *BULLDOG*—1849–1850

THE opening of the New Year found the *Bulldog* still at Civita Vecchia. On the 3rd of January, Key made the following report to the commander-in chief—

"The promulgation of the decree for the convocation of the Constituent Assembly, which I mentioned in my letter of 30th December, has developed a different feeling in the people of the provinces and the majority of the Romans to that which I was then led to expect. The clamour which had been raised for its formation appears to have emanated from the clubs in Rome and the provincial towns. The feeling now existing against it, though but little expressed, from want of union in the provinces and from a fear of the troops in Rome, is not the less universal, and is very evident from the sullenness with which it has been received, and the general refusal to join in any rejoicings for its adoption.

"Galletti and Camerata, the two remaining members of the Giunta, have withdrawn from the Government; and Sterbini, who may now be said to govern Rome, assisted by about 3000 troops, has vainly endeavoured to persuade the civic guard to join with them in any expression of approbation of the Constituente. It would appear impossible, with such a majority against it, for Sterbini's Government to exist, were it not for the support of the troops, who take part with those who pay them. And although there is more than sufficient force either in the city or the provinces to overthrow the Government, had they the inclination, yet what advantage would accrue to them as a moderate party from a step which might produce bloodshed, and would at once give the Pope a sufficient apparent excuse for taking any measures against them?

"From this, and from information obtained from different sources, it is my firm conviction that there exists a nearly universal wish for the Pope's return, and that a very slight conciliatory disposition on his part would be responded to, and meet with favourable terms of accommodation, by his subjects.

"The people of Bologna and Ancona have already declared for him; and had the Romans any communication with His Holiness, they would, I feel confident, follow their example. But, deprived of all power of making their wishes known, by his refusal to communicate, and the absence of foreign ministers, they only await the time when His Holiness may see fit to ascertain their opinions; and meanwhile they feel it to be their duty to maintain order.

"It appears undoubted that the troops would join any Government that has the power of paying them, and that, on the fall of Sterbini and the present ministry, they would adhere to their successors without a struggle.

"May I then with deference offer, that if the wishes of the Romans could be conveyed to the Pope, it might be the means of saving bloodshed in Rome, and the preservation of the Pope's temporal power without recourse to foreign intervention." [1]

The authorities at Civita Vecchia do not seem to have been very friendly to the *Bulldog*, and they took some opportunities of crossing her. The following is Commander Key's account of one of these minor troubles, given in a letter to Mr. Freeborne, the British consular agent at Rome—

"With reference to your letter of the 3rd of January, enclosing a remonstrance on the part of Mgr. Muzzarelli, relative to proceedings of H.M.S. *Bulldog*, under my command, on the 29th ult., I beg to state that, at 2.30 a.m. on the 29th ult., the *Antelope* having left Leghorn in pratique, arrived off this port, and sent a boat in to communicate with the *Bulldog*. This boat, on approaching, was hailed twice not to come on board. The officer, however, boarded and delivered a despatch and a certificate of health signed by the commander and surgeon of the *Antelope*.

"The commanding officer of the *Bulldog* directed that no communication should take place with the shore until notice had been sent to the health officer, after daylight, of the occurrence. About an hour after, the health officer came on board and placed the ship in quarantine. At 9 a.m. an officer called at the health office, made a declaration of the facts, and explained how the irregularity had been committed. At 11 a.m. the *Bulldog* received pratique.

"From this statement, I trust that H.E. will observe that the confidence which is invariably placed in British officers in every port in Italy, except in Civita Vecchia, as regards their strict and conscientious conformity to quarantine regulations, is not without just grounds.

"His Excellency will also perceive that in the present instance no infraction of the sanitary law has taken place, and I hope may therefore be induced to give such directions to the authorities at Civita Vecchia as may prevent complaints involving groundless suspicion of British officers in future."

Events at Rome marched in the direction of one of the alternative roads sketched out by the commander of the *Bulldog*. On the 11th of February he wrote to Sir William Parker—

"The Roman Constituent Assembly, which met for the first time at Rome on the 5th ult., was received by the Roman populace without any sign of enthusiasm or even of satisfaction, notwithstanding the numerous attempts to excite it by processions, ceremonies, and speeches. After two days' preamble, it proceeded on the 8th to decide on the form of government which should be adopted in the Roman States. At the conclusion of a sitting which was prolonged until 1 a.m., on the 9th, the following articles were decreed :—

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[1] I think it must have been to Commander Key, and in reference to this letter, that Sir William Parker wrote, hinting that though these public letters were "excellent," yet, as some of them went home, it would be desirable to moderate the tone so as to make it appear that he was not giving his own opinion, but stating those of others.—*Life of Sir William Parker*, iii. 454.

"ART. 1st.—The Papacy is fallen, by deed and by right, from the temporal government of the Roman States.

"ART. 2nd.—The Roman Pontiff shall have every guarantee for the independent exercise of the spiritual power.

"ART. 3rd.—The form of government of the Roman States shall be a pure democracy, and shall assume the glorious name of 'The Roman Republic.'

"ART. 4th.—The Roman Republic shall have those relations with the rest of Italy which the common nationality requires.

"This decree was announced both at Rome and Civita Vecchia by the ringing of bells, a salute of 101 guns, and a change of the Papal flag for the Italian tricolour. I have not yet heard whether much enthusiasm was exhibited at Rome by the people. More was shown at this place (Civita Vecchia) than I had expected."

In a private letter of 12th February, Key says—

"The Romans, as I daresay you know, have declared the Papacy to be deprived of the government of the Roman States, and have declared a republic. Poor children! They want me to salute their new Government, but no—I have done that once.

"I daresay it amuses you sometimes to read of all the outcries about our having saluted the Sicilian flag. You know it was I who did it, on my own responsibility. But my name has never been mentioned publicly, I am happy to say, as the admiral instantly took the burden off my shoulders, and Lord Palmerston off his. I knew from Lord P.'s private letters that it was his wish, but I had no orders.

"I perfectly agree with the line of policy Lord P. has adopted with regard to the kingdom of Naples, and I feel convinced that when the events of the past year are reviewed and summed up by an impartial historian, that he will get the credit he deserves, notwithstanding the pack of curs snarling at him daily, with that wretched *Times* (on that question) at the head.

"While I was writing this, a steamer arrived from the admiral, ordering me to look for and protect the Grand Duke of Tuscany, who with his family had fled from his dominions."

So the *Bulldog* was off again on a fresh mission of relief to popes, grand dukes, and other representatives and victims of an Old-World system which was everywhere tumbling about their ears. This time the *Bulldog* was to go to San Stefano,[1] where it was expected the Grand Duke would be found. There also Key would find the *Thetis*, under the command of his old friend, Captain Codrington, under whose orders he was to place himself, being ready to take the Grand Duke and his family to any port in his own dominions, or to any other port in the Mediterranean to which he might desire to be taken. Key detailed his proceedings in a letter to the commander-in-chief, dated Naples, 22nd February—

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[1] A small fishing village close to the southern frontier of the Grand Duke's dominions.

"According to the instruction contained in your memo. of the 11th inst., I left Civita Vecchia in H.M. steam sloop under my command on the morning of the 13th, and arrived at San Stefano the same evening, where I found H.M.S. *Thetis*.

"Owing to circumstances with which you are acquainted, Captain Codrington deemed it advisable to remain at San Stefano until H.R.H. the Grand Duke of Tuscany had decided on the course he intended to take. As he will therefore have informed you of all events up to the departure of H.R.H., I have only to add that on the evening of the 20th the report that a republic had been proclaimed at Florence being announced at Orbitello (a town six miles from San Stefano) by a royal salute, caused such alarm to H.R.H. as to induce him to embark at once in H.M. sloop *Bulldog* with his family and suite, consisting of forty-seven persons. He expressed his desire to remain on board in the port of San Stefano until the afternoon of the following day, when, after a consultation with the Corps Diplomatique, he requested Captain Codrington to allow the *Bulldog* to take him to Gaeta. Captain Codrington directed me to carry out your orders. I therefore weighed, and arrived at Gaeta on the morning of the 22nd, when H.R.H. landed to visit H.M. the Queen of Naples and the Pope; and then desired me to take him to Mola, where H.R.H., family, and suite disembarked at 4 p.m.

"At 7 I weighed from Mola, and proceeded to rejoin your flag in Naples Bay."

Writing privately of the Grand Duke of Tuscany's flight, Key says—

"He was quite undecided as to what course he intended to take. We naturally advised him on no account to quit his dominions; and as Charles Albert sent to offer him 20,000 Piedmontese troops to join with his own army in replacing him on his throne at Florence, we advised him without hesitation to accept it. This, after twenty-four hours' deliberation, he did, and sent an order to his general to advance on Florence, saying he would join him in two days at Massa. Think now of his next step! The Grand Duchess, you know, is sister to the King of Naples, and she, at heart, wished to accept her brother's offer of an asylum at Gaeta or Naples, and thus join their fortunes to the Pope's.

"She is a most charming woman, but I fear very jesuitical, and, her influence with her husband proving greater than Captain Codrington's, the Grand Duke one evening sent to me to ask me if I would take him to Gaeta, and as I consented—having the admiral's authority—he embarked in great haste with his family and suite. . . .

"The royal family I liked very much indeed, especially the Grand Duchess, with whom I became great friends. The ladies and gentlemen in their suite were not so charming. On leaving the ship, the Grand Duke wished to present me with the Order of San Josef, which I of course declined. You can't think how charming the Grand Duchess was,—so cordial; and so attached to her children. . . .

"The admiral is going to Palermo, and, I hope, will be the bearer of terms that will settle the Sicilian question—for the present at least.

"By the bye, I am told that the *Chronicle* has dragged me into good company by adding my name to a list of delinquents who have conspired to overthrow the King of Naples' Government in Sicily. I have not seen it myself; have you? It is in the *Chronicle* of the 8th or 9th (of February?) I believe. . . .

"I am now on my way to Genoa; a revolution is expected there, so do not be surprised if you hear of Charles Albert taking refuge on board *Bulldog*,—he is very shaky on his throne."

Nothing resulted from this trip to Genoa, and *Bulldog* was back at Naples on the 9th of March, and lay there till the 22nd, where, says Key—

"The King of Naples and his brother (the wretches!) have been very gracious to me, on account of what they call my kindness to their sister, the Grand Duchess."

On the 22nd of March the Government of the King of Naples, in two successive notes, announced to Mr. Temple, our minister, the failure of the English and French admirals to bring about a reconciliation between the revolted Sicilians and the King's Government. As a consequence, the notes declared the blockade of Palermo and the adjacent coasts; announced the watching of all Sicilian ports to prevent the entry of arms and supplies; and informed the minister that it was determined to proceed at once to the recovery of Sicily by force of arms.

On the receipt of these notes, the English and French ministers, as a last effort to prevent the miseries which were about to ensue, requested Key to carry them both to Palermo in the *Bulldog*, which he did, arriving there on the next day. But the intervention of the ministers proved of no more avail than that of the admirals had been. The Sicilians had developed an entire distrust of King Ferdinand, and hated him with a pure fervour.

As a consequence of this, Key on the 27th of March was ordered to the south-east coast of Sicily, "to put himself in communication with the Vice-Consuls at Syracuse and Catania, for the purpose of protecting the persons and property of Her Majesty's subjects resident at those and the adjacent ports, and of supporting British interests on the general principles of international law and strict neutrality." He was to take care that British subjects were duly informed that the Neapolitan Government would not be responsible for any losses they might suffer in the hostile operations, and warned them they were not to interfere in the affairs of the belligerents. "The prominent feelings of humanity," wrote Sir William Parker, "will, however, doubtless prompt the exercise of any act towards the latter by which, without compromising your position as a neutral, you can in any way mitigate the severities of war."

On the 3rd of April, Key wrote the following report from Messina—

"According to your orders, I left Palermo on the evening of the 27th for Marsala. When off Cape St. Vito, a strong breeze set in from the westward with considerable sea; I therefore, knowing it to be impossible to communicate with Marsala, bore up for Messina, where I arrived on the evening of the 28th.

"The Prince of Satriano was then making every preparation for moving his forces, which then amounted to 15,000 men.

"I left Messina on the 29th for my station off Catania, from which place I sent information to Captain Dundas[1] of my inability to communicate with Marsala. On communicating with Mr. Jeans, H.M. Vice-Consul, I found the Catanese as enthusiastic and as united in their cause as the Palermitans. They have made many sacrifices for the defence of their city, which is well capable of being defended from an attack by land, but can do nothing against a naval force. All the peasantry from the surrounding country have flocked into the town with their arms, and 6000 regular troops have advanced to the northward to defend some difficult passes against the Neapolitans. On the 1st of April, news came from Taormina that the Neapolitans had been throwing shells into that town and one or two neighbouring villages. On the morning of the —— I proceeded, under sail and easy steam, to Taormina, about twenty miles north of Catania, and found that the different reports which had reached the latter place were true; viz.:—that on the night of the 30th of March about 6000 Neapolitan troops had marched from Messina to the southward by land, and Filangieri had embarked with 7000 or 8000 men in three frigates and thirteen steamers, and accompanied the land force to cover their march. They found some resistance in the neighbourhood of Ali, which they burnt to the ground, destroyed the old fort of Alesso, and then marched towards Taormina, the steamers throwing shells on shore in advance of the troops. On my arrival at Taormina, the force that was embarked had landed under command of Filangieri, and were stationary at the foot of the hill leading to the town. The whole force had been off this place for three days. It is not fortified or defended in any way but by its position, and there were no Sicilian troops stationed there. The town was burning in two places, and some cavalry were ascending the hill as if to take possession. The frigates and steamers were standing off and on in the vicinity.

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[1] Captain Hon. R. S. Dundas, of the line-of-battle ship *Powerful* at Palermo. He was afterwards Commander-in-Chief in the Baltic in 1855.

"As it was evident that no more could take place for at the least twenty-four hours, and being within twenty-eight miles of Messina, I proceeded under sail and easy steam there to send information to you of the line of operations that the Neapolitans appeared likely to adopt. I shall proceed to the southward to-night."

In a private letter, written at the same time, Key gives further interesting details—

"Since my last letter, which was written while the two admirals were at Palermo endeavouring to persuade the Sicilians to accept the terms, the two ministers, Mr. Temple and M. Rayneval, went to Palermo in *Bulldog* to see what they could do. They found the whole island united, as I knew they were, in hatred to the King, in a contemptuous rejection of the terms, and in an enthusiastic desire for war—not for the foolish, selfish reasons that the Piedmontese have, but the honest desire of a united people for free institutions.

"The Sicilians have a very distinct character from the rest of the Italians; this is shown very forcibly in the universal wish for a monarchical form of government, not a republic. The ministers found that they could do nothing, so they returned to Gaeta, officially announcing that their mediation was at an end, and the armistice was to conclude on the 29th. The admiral then sailed for Naples in *Hibernia*, leaving the *Powerful* and *Odin* at Palermo; sent the *Queen* to England to be fitted to receive his flag, as I am happy to say *he* does not go home just yet,[1] and sent me round the island to visit all the ports, and to consider the east coast of Sicily as my station until the Neapolitans have regained possession of every port, or they have been finally repulsed.

"With permission to go where I think it advisable, either to Naples or Malta, this gives me plenty of active employment and responsibility. I am now at Catania, where we expect the Neapolitans to come to attack it to-morrow morning. Poor Sicilians! I fear their good cause and good hearts will avail them but little against the numbers and discipline of the Neapolitans. I hope you do not believe all the trash they put in the papers about the Sicilians. The correspondent of the *Times*, especially at Naples, most shamefully perverts facts, and seizes at anything that will militate against Lord Palmerston, who has acted in the whole of this mediation with great sagacity and thorough honesty. No one can understand this so well as those on the spot, and who can see the true bearings of the case on each side.

"However, the King *may* reconquer the island, but he will never reconquer the people. With liberal institutions, Sicily would become one of the finest countries in Europe; under the old system of oppression and espionage, she must continue in ignorance and poverty. And yet the King cannot see that it is to his advantage that Sicily should flourish. It grieves me to the heart to think that these poor people have now to suffer from their towns being bombarded and pillaged, and then to have the old yoke placed on their necks, which will press harder from the freedom they enjoyed during the past year. We ought indeed to be thankful (as I remember I used to repeat in a child's hymn) that we are born Britons! Bless dear old England, our dear Queen, and our old institutions; and confusion to them who, in endeavouring to pursue the shadow of liberty, risk to lose the substance. Much as Lord John and Lord Palmerston have been abused, I think they have carried us through the past year nobly!"

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[1] The rule of a cast-iron exactitude, born of long working in routine grooves, did not then exist. Sir William Parker hoisted his flag in July 1845, and did not haul it down till the 28th of April 1852. In a cautious suggestion that he had some claim to a longer period of service than usual, and that it would be agreeable to him, Sir William, in September 1847, pointed out that the three years' command was only a usual, and not a fixed, period. It was his usefulness and not his convenience, however, that prolonged his command.

The miserable history of the reconquest of Sicily is continued in the following successive reports to Sir William Parker. The first is dated Catania, 7th of April—

"I left Messina at daylight on April 4th, and, proceeding slowly down the coast towards Catania, I observed nearly all the villages on the coast to have been destroyed by fire. Taormina was still burning; the Neapolitans and Swiss were in the neighbourhood of Giarre, and the squadron cruising in the vicinity. At Catania I found the whole population armed and prepared to resist the invading force; the unanimity and enthusiasm of the people cannot be described. They had previously imagined that the Neapolitans would either keep on the coast road or disembark troops to the southward of the town; they had therefore defended these two approaches. Now, however, as Filangieri appeared inclined to advance along the Borgo, which enters the town from the hills behind on the N.W. side, their resistance appeared hopeless. Nevertheless they made every effort during the short time that remained to them, to barricade and destroy this approach. They also completed the arming of the forts, having placed sixteen or seventeen guns in three temporary batteries which they had erected on the shore.

"I made arrangements for the embarkation of Mr. Jeans, H.M. Vice-Consul and family, and of any other British subjects who might come to him for protection.

"On the morning of the 5th three Neapolitan frigates,[1] towed by steamers, appeared in sight, approaching the town, and soon afterwards seven steamers rounded the point of the Cyclops in line, and steered directly for the town. I embarked the Vice-Consul and two or three English residents; sent the ex-Austrian Consul and a Maltese family, who came to this ship for refuge, to Malta in an English brig then on the point of sailing, and weighed to be clear of the line of fire. The steamers rounded-to off the town at the distance of a mile and a half, as if preparing to bombard the forts; then opened fire on them, which they returned with shell, though at too great a distance to damage either party. This lasted about an hour, about three shells having reached the town during that time; when the steamers hauled off and returned to the position of the army near Aci Reale.

"On the morning of the 6th the squadron again appeared in sight, consisting of three frigates and ten steamers, the frigates working up for the town. At 11.30 seven steamers rounded-to at the same distance as before, and a mutual cannonade commenced between them and the forts. About noon the smoke arising from burning villages and defenceless houses betokened the approach of the invading army. The Sicilians, in order to remove the struggle as far from their town as possible, advanced in masses to meet them. The first encounter appeared to take place about five miles from the town, when the Sicilians evidently disputed every foot of ground, having taken advantage of an elevated spot and some ruined walls to check the advance of their enemy. They were driven back, however, step by step, rallying at every obstacle. The Swiss and Neapolitans spared nothing in their march; every hut was set fire to; in fact, their advance was traced five or six miles towards the town by an uninterrupted line of smoke. About 1.30 the two leading frigates, being able to fetch the anchorage, bore up when within a mile and a half of the town, and fired their broadsides. The shot fell harmlessly in the water. They then hauled off, the Sicilians firing on them as they did so. The cannonade between the steamers and the forts was maintained on both sides until dark. At 4 the Swiss and Neapolitans appeared to be entering the town by the main street, still burning all behind them. I could hear continued volleys of musketry and field-pieces as they advanced up the street, but could not distinguish if the inhabitants of the houses were resisting. At 7 p.m. the Neapolitans appeared to have obtained possession of the city as far as the cathedral, as the burning of the houses reached that point. There was little firing during the night; half the beautiful city of Catania appeared in flames.

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[1] Sailing ships.

"This morning, although the Sicilian flag appeared on one of the forts, there seemed to be no symptoms of further resistance. I therefore weighed from our position in the southern part of the bay and returned to our former anchorage close off the town. The Neapolitan squadron soon followed our example. . . .

"I fear I have occupied much of your time in describing so simple an act as the capture of an unfortified manufacturing town; but as I have always been informed that the Catanese were more peaceably inclined, and more easy to be reconciled to the government of the King of Naples than the inhabitants of any other town in Sicily, I think it my duty to state the facts of their noble resistance, that a conclusion may be drawn of the general state of feeling in the island, and of the mode of invasion which seems required for its reconquest.

"Catania, which is more beautifully built than any town in Sicily, and the inhabitants of which are principally manufacturers, has no natural or artificial means of defence, yet, with the assistance of only two or three regiments of regular troops, it has made a resistance which they knew must be hopeless, yet is sufficient to cause the Neapolitan general to use his entire force for its reduction, and, when captured, to deem it necessary to burn it."[1] . . .

Key's anger was now touched to the quick by information that the town had been given up to pillage, and that the troops were committing atrocities of every description. He sat down and wrote the following letter to the Neapolitan commander-in-chief, Prince Satriano—

"EXCELLENCY,—I feel assured that you have only to be made acquainted with the pillage and destruction of property now taking place in the town of Catania, to use your authority to prevent it.

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[1] The Admiralty acknowledged this letter by saying they "had read it with interest, and thought it highly creditable to" Commander Key.

"I conjure you, therefore, in the name of humanity, to endeavour to restrain the troops under your command from committing those excesses which I am aware are but too common in the hour of victory, but which until now have never been known to have taken place on the capture of an unfortified, defenceless city.

"The house of H.B.M. Vice-Consul, which is situated near the sea-shore, and is distinguished by a white ensign, I recommend to your Excellency's protection.

"Your Excellency will, I am convinced, appreciate the motives which have induced me to bring the conduct of the troops under your command before your notice, thus affording you the opportunity of exercising the noble attributes of mercy and forbearance."

The prince did not send any immediate answer to this appeal, but an hour afterwards he sent a guard to the Consul's house, and mounted patrols paraded the streets. English property of every description had been respected all through the struggle.

The next report was from Malta, and dated 10th April—

"In continuance of my letter of April 7th, I have the honour to inform you that on the evening of the 7th I went on shore to ascertain the extent of damage the city of Catania had sustained. I found in the main street by which the troops entered the town, and which is more than a mile in length, not thirty houses had escaped destruction. Among those which suffered are the hospital, the university, and several palaces. Many houses in other parts of the town had been burnt, and from Via Grande to the entrance of Catania, a distance of eight miles, not a house has been spared. It is the devastation that Messina suffered in the suburbs carried into the heart of the city.

"From daylight on the 7th till the afternoon of the next day the troops continued to pillage. On the first day it was accompanied by fearful excesses, burning and destroying every species of property; some attempt was made to restrain them on the second.

"On the evening of April 8th, Mr. Jeans returned to the vice-consulate.

"At midnight on the same day the Neapolitan squadron weighed and proceeded to the southward. I followed them with the French steamer *Descartes*, and entered the port of Augusta with them the following morning, the town having capitulated. I then proceeded to Syracuse, to prepare the British Vice-Consul to embark in case it should be necessary for his safety.

"Soon after my arrival, a deputation from the civil authorities of the town came on board to request that I would sign terms of capitulation which they showed me. I refused to do so, as I conceived that a fortress from which the troops had withdrawn was entitled to no conditions but what the general to whom it was surrendered chose to concede. However, I called on Captain Bouet of the *Descartes*, and found that he had refused the same request. He consented to accompany me on board the Neapolitan frigate *Regina*, bearing the commodore's pendant, which was then approaching the town, to convey the intelligence of the capitulation to the commander of the troops, and to endeavour to persuade him to extend his mercy to people of all classes captured in Syracuse. We were received with the greatest courtesy, and the commodore promised to respect the lives and property of the inhabitants. Syracuse was accordingly taken possession of by the Neapolitan forces, without resistance, on the evening of April 9th.

"The commandant of Syracuse, a Pole, with an English family, and several other deeply compromised Sicilians, having come to me for protection, I received them on board; and when I had seen guards placed over the vice-consulate and the houses of two or three Maltese, I determined to go at once to Malta to land the refugees, as no other means was likely to offer of placing them in safety, and then to return to my station without delay."

The next letter is from Catania, and dated 12th April—

"On my return to Catania, on April 11th, I learnt that Filangieri had despatched General Nunzianti with 7000 men into the interior of the province to reduce the neighbouring towns, and perhaps with the hope of his falling in with the Sicilian general, Mieralowski, who, it is said, is occupying Castro-Giovanni with the remnant of his army, about 4000 men. Five steamers have been sent to Naples to bring over two more regiments of Swiss troops and two or three of Neapolitans.

"General Filangieri has issued a proclamation calling on the Sicilians to return to Catania and resume their former occupations, which has had but little effect. This, however, is not to be wondered at, when the conduct of the Neapolitans on entering the town is considered. I have made inquiries in several quarters, and cannot ascertain that the Neapolitan-Swiss army had possession of a single prisoner, either wounded or unhurt, on the morning after the capture of the town. But a German resident, on whose statement I can rely, has informed me that he counted in one street 45 Sicilian bodies burnt; many with their hands tied, and several of them wounded. I believe, therefore, the reports I heard from every source, even from the Swiss themselves, to be true—that they showed no quarter to either prisoners or wounded: all were butchered. The loss on the part of the Swiss and Neapolitans was, as near as it has been ascertained, about 200 killed and 600 wounded, a large proportion among the Swiss. It is stated by all parties that without the 4th Regiment of Swiss the troops could not have entered the town, and that while they were advancing down the streets the Neapolitans were burning the houses and butchering the prisoners.

"The conduct of the Neapolitans in this instance is so strongly contrasted with the treatment they received from the Sicilians in January 1848, that I cannot forbear bringing it before you. At Palermo, at that time, the Neapolitans in the finance building had resisted the attacks of the Palermitans for fourteen days, who daily suffered considerable loss. On the 27th January, after a violent assault in which the defenders retreated to an upper storey, the building was taken, when, to the honour of the captors, the troops were merely disarmed; not a man was injured; their wounded were sent to a hospital specially appointed. The rest were well fed and carefully treated, and the property found in the bank was delivered over untouched to the provisional Government. To this I was an eye-witness. At Catania, during the same month, two of the public buildings were taken by assault after some loss of life on each side. The troops were in both instances fed and kindly treated, assigned quarters, permitted to walk about the town until vessels arrived to take them to Naples. Some of these very soldiers now form part of the invading army.

"The feelings of horror excited by the barbarous description of warfare now carried on by the Swiss and Neapolitans may, I trust, excuse me for referring to an event long past."

Naturally, these feelings, characteristic of most Englishmen, and in especial degree of him whose career I am tracing, found freer vent in private letters than they could in those bounded by official reticence—

"You will have heard, perhaps, from the papers of the assault and capture of Catania, if those sort of things interest the people of England sufficiently to put them in the papers, which I doubt. To an eye-witness, it was a scene of horror that can never be forgotten. This beautiful city! nearly destroyed, and given up for two days to pillage and destruction by the invaders, who during that term committed atrocities of every description! It is difficult to believe that we are living in a civilised age. The Catanese made a noble defence—the more noble as they knew it was hopeless."

There is a word or two about his professional prospects and one or two other matters in the same letter, which, as illustrative of character, are worthy of note—

"I begin to fear that my promotion is a long way off yet. No one can get made until the captains' list is reduced to 500, which will not be for a year or more.[1] They have made so very few during the past year that the number of applicants and expectants is enormous. Sir William Parker is my great stand-by, and, when the time comes, Lord Mount-Edgcumbe and Lord Minto will do their best for me. Sir Francis Baring[2] is a very impartial man, so perhaps between us all we may succeed. They say the *Arrogant*[3] is going to relieve us; that, however, is very doubtful. Did you see that article in the *Nautical Standard* about my flogging a man at Civita Vecchia, and thereby destroying English influence in Rome. If you did, I hope you did not pay attention to such trash. If our influence in Rome depends on so slight a support, it cannot be of great value.

"Will you tell Smith & Elder to send to Gillott's, for me, *Sketches in Revolutionised Italy*, by M'Farlane, lately published by them. It is a book which takes the same view of our Italian diplomacy as the *Times*, which therefore is very erroneous, but still it has all the arguments collected into a small compass, and I should like much to have them by me. I should like also to have the *Past and Future of the British Navy*, by Plunkett. Have you ever read Tupper's *Proverbial Philosophy*? I think you would like it."

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[1] At this date the captains' list contained 526 names, and the flag list 150, the latter having been fixed at that number in 1847. Only 15 commanders had been promoted in 1847, and 14 in 1848; but the latter year included the name of A. P. Ryder, who had been, when promoted for services in action, only two years and four months a commander. The senior captain on the list had been there for 35 years.

[2] Sir Francis Baring had become First Lord of the Admiralty on the death of Lord Auckland at the end of 1848.

[3] A new screw frigate.

The reconquest of Sicily went steadily on, and Key was passing from port to port, constantly on the move to reassure British residents, and to keep watch on the progress of events, as well, it must be said, as to offer an asylum to prominent members of the revolutionary party in Sicily. In this way he took on board, on the 26th of April, the Governor of Trapani and his family, and then on the 28th the ex-President of the Sicilian Government, Don Ruggiero Settimo ("honest old Ruggiero Settimo," Sir Wm. Parker called him), at Palermo. Palermo had, in fact, listened to the advice of the French Admiral Baudin, and had surrendered to the King of Naples without striking a blow. The conquest of the island being thus complete, Key took his refugees to Malta, and landed them there.

If 1848 was the year of revolutions, 1849 was that of inevitable recoil and reaction. Sicily we have seen reduced to obedience to the King. Charles Albert, who had done so much to stir the fires, had been defeated by the Austrians at Novara on the 24th of March, and was now a refugee in France, having abdicated in favour of his son, Victor Emmanuel. Genoa, which had been heaving with revolutionary throes, had submitted to the new King, and the amiable Duke of Tuscany had been recalled to his dominions by acclamation.

Rome alone stood firm for the new régime, but France had determined that this should not be, and, on the 25th of April, General Oudinot and Admiral Trèhouart arrived with sufficient land forces to carry out the design. The new phase required to be watched, and Key was once more ordered to his old post, Civita Vecchia.

The *Bulldog* was there on the 6th of May, and Key was under orders to "afford protection to the British residents at and in the vicinity of Rome, and to observe the movements of the expeditionary forces which are said to have lately disembarked from Toulon, in the Roman States, and also of a division of the Neapolitan army, which is expected to act in conjunction with them."

Key now made the series of reports which follow—

"CIVITA VECCHIA, *May 12th.*

"According to your order of the 2nd inst., I arrived at Civita Vecchia on the 6th, and there obtained the following information, the truth of which I have since confirmed:—

"You are already acquainted with the movements of the French army up to the 28th. On the morning of the 29th, General Oudinot, who was then encamped at Maglianella, about five miles from Rome, ordered the advanced guard (consisting of 5600 men, with two field-pieces) to approach the city, conceiving that he had merely to show his intention of attacking and the gates would be opened for his admittance. They advanced towards the Porta Cavalleggeri and S. Pancrazio, the principal force appearing before the former, which is the strongest and most easily defended point of the city. When near the walls, Garibaldi, who was lying in ambush with about 2000 troops on the right flank of the French, surrounded a detachment of them, and captured at one stroke 268 prisoners. As the French approached the Porta Cavalleggeri, a masked battery opened fire on them, and volleys of musketry poured from the walls.

"The French brought up their two field-pieces, and attacked the walls with unflinching courage. All, however, was unavailing against so strong a position; and, after attempting to scale the walls with spike-nails, and having between 300 and 400 men put *hors-de-combat*, they were compelled to retreat, with a loss, in killed, wounded, and taken prisoners, of upwards of 600 men. The general then withdrew his force to Palo,[1] to await reinforcements from France.

"In this position I found them on my arrival at Civita Vecchia on May 6th, —part of the reinforcement having been just landed from the squadron under Rear-Admiral Trèhouart.

"Having been informed that, owing to the preparations that were being made for resistance at Rome, the English residents had great difficulty in quitting it, I deemed it my duty to go there to endeavour to extricate them before a second attack was made. For this purpose I went in the *Bulldog* the same afternoon to Palo, and, leaving her at that anchorage, proceeded by land early on the 7th to Rome, having obtained permission from General Oudinot to pass through his advanced posts.

"Arriving at Rome, I found the gates barricaded and fortified, the walls of the city much strengthened, and every appearance of a determination to make a vigorous resistance.

"I went without loss of time to the Triumvirate, acquainted Mazzini that I had come to assist the British residents in leaving Rome, and requested him to aid me in doing so. He showed every disposition to do all in his power for the benefit of our countrymen, but said that the impediment was purely a military one. The horses required for posting are the property of Government, and the loss of those which would be required to take away the foreigners would considerably weaken them; also, that if foreigners were permitted to go to Civita Vecchia, information would be conveyed to the French, and the horses fall into their hands. This was reasonable; but on my showing him how unwise it would be to detain foreigners in Rome at this moment, and how little their cause would suffer from the information conveyed by a few frightened women, I obtained permission for foreigners to leave Rome in any direction with private or hired horses, and I guaranteed that the horses should not be detained by the French army. Within two days nearly all who were anxious to leave were gone, those remaining doing so from their own dilatoriness, or possessing property from which they would not separate. This property was considerable, but the Triumvirate promised to take it under their special protection.

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[1] Palo is a town on the sea-coast, midway between Civita Vecchia and the Tiber.

"On the afternoon of the 7th the Roman Government decided on releasing the French prisoners. They were brought out in the streets and received with every mark of good feeling by the people, who cheered them, gave them food, and showed them round St. Peter's and the monuments; the French in return saying they had been deceived, having entered the Roman territory with the idea that they were to join the Romans against the Austrians and Neapolitans. They were then permitted to return to their own headquarters.

"On the morning of the 8th I went to Albano, the headquarters of the Neapolitan army, to obtain a promise from the general-commanding to protect the British in case he should take Rome by assault.

"I found the army, which consisted of about 14,000 men, with upwards of 40 pieces of artillery, occupying Albano and Velletri, with the enclosed country, the King commanding in person. On making known the object of my visit through General Caselli, the second in command, His Majesty expressed a wish to see me. I repeated my request to H.M., who, in the most cordial manner, promised his especial protection to the English if the contingency I referred to should arise. I specified the part of the town in which their property was situated. His Majesty then showed much anxiety to become acquainted with the movements of the French army, and to learn the particulars of their repulse. I informed him as far as I felt myself at liberty to do. He evidently was entirely ignorant of their intentions, as well as of the position of the Romans; and I received the impression that His Majesty was not at present meditating an attack on Rome, but had sent to the French general to persuade him to act in concert with him. The people at Albano, though not republicans, are much dissatisfied with the Neapolitans, who have enforced the cry of 'Viva il re' everywhere, and imprisoned many who were suspected of being averse to the intervention.

"I returned to Rome the same afternoon, and again went to Mazzini to repeat my request for the protection of the British property which must unavoidably remain in Rome. He, after assuring me of its safety from all within the walls, asked me my opinion of their prospects. I could not then refrain from stating unofficially what I thought might save bloodshed if acted on. I answered, that it seemed to me madness to think of resisting; that it was evident that Rome must fall, either to the French at once, or to the Catholic Powers combined. That now was the moment to treat with the French alone, and that this moment would soon pass, as, the French having received a check, they would not be satisfied till they obtained possession of Rome. Delay on their part to attack, or on that of the Romans to treat, would increase the probability of a combination of the Catholic Powers, in which case the Romans might rest assured that the old form of government would be imposed upon them. That at present they had saved their honour, and were enabled to treat with the French alone, with even greater advantage than they had previously possessed. In fact, I used every argument to convince him of the folly of resistance.

"Mazzini replied, that they had great confidence in the good feeling of the French people towards them; and that, on the arrival of the news in France of the real object of the expedition, a violent reaction would take place in their favour. That a combination of many Powers was more likely to defeat the object in view than to obtain it; and he showed evidently that Avezzana and he (who are now the actual leaders of the Romans) are determined to hazard this last venture. It is their last in Italy, for when Rome surrenders it is all over with them. Ambition is the motive from which they act, and with this they have identified their feeling for the Italian cause.

"The general feeling among the Roman people appears to be in favour of making terms with the French, as they show no objection to the return of the Pope, but great repugnance to an ecclesiastical Government. The leaders keep up their determination to resist, by means of their recent successes, by a promise of assistance from Bologna and the provinces, and by encouraging the feeling against the priests; assuring the people that the return of the Pope can only take place with the old system of a spiritual administration.

"On the morning of the 9th I left Rome for Palo, and found the advanced guard of the French at Castel de Guido (12 miles from Rome). Reinforcements had arrived from France, which completed the army to about 15,000 men, including 1500 cavalry, 26 field-guns, and 6 heavy siege pieces. On the morning of the 10th the main body advanced from Palo to Castel de Guido, and it was the intention of General Oudinot to follow with the rear guard on the 12th, and to assault the city with all his force without loss of time. I imagine also that he had signified his intention of attacking on a certain day to the King of Naples; so that, without a combined operation, a simultaneous advance may take place.

"M. Rayneval, the minister of France at Naples, arrived at Palo to confer with General Oudinot on the 9th; and on the 10th, as I intended to proceed to Civita Vecchia, I conveyed him from Palo to that place.

"On the evening of the 10th about 2000 more troops arrived at Civita Vecchia, in two steamers and a transport. They disembarked on the following morning, and encamped outside the town.

"The present position of the respective forces appears to be as follows:—The Romans are prepared to defend the city against all attacks, with a decided animosity against the Neapolitans, but with no ill-will towards the French. They have about 30,000 armed men in the city, and Garibaldi with about 6000 is hovering about the right and rear of the Neapolitans. These numbers are uncertain.

"The Neapolitan army at Albano and Velletri are in great fear of Garibaldi, and very anxious to join their forces with the French.

"The Spaniards have landed 40 men at Terracina.

"The French are now advancing with their whole force on Rome, which will consist, when all have joined the general, of about 14,000 men, about 2000 more at Fiumicino, who will march up the left bank of the Tiber to make a diversion in that direction.

"I think it is probable that the attack will take place about the 18th of May; and as there are many parts of the walls where half an hour's cannonading would completely demolish them, the French will enter the town with ease, and, although the streets and houses are *well* barricaded, but little resistance will be made when once they have obtained possession of one or two strong points in the town.

"At Palo the French flag is hoisted on the castle; at Civita Vecchia it still floats on the same staff as the Italian tricolour. No attempt to replace the Pope's arms, or to restore his authority, has yet been shown by the French, and they do not appear to be in the slightest degree aware of the object they have in view in the present occupation of the Roman territory.

"Three days after the occupation of Civita Vecchia, a priest arrived from Gaeta to take on himself the government of the place in the name of H.H. the Pope. He was sent back to Gaeta."[1]

"*May 17th*, 1849.

"On the 13th ult. I left Civita Vecchia for Palo in H.M. steam sloop *Bulldog*, to be in a position to obtain more certain information concerning the movements of the French army. I found the headquarters had removed to Castel de Guido, and, as nothing could be ascertained at Palo, I proceeded to the vicinity of headquarters.

"The main body of the army, under General Regnault, the second in command, was then at Maglianella. A body of about 4000 men was advancing up the right bank of the Tiber; and 2000 were detached to reconnoitre in the vicinity of Ponte Molle, on the Florence road.

"On the 15th, M. Lesseps, an envoy from France, passed through the camp on the way to Rome. The same morning the army advanced, and on that and the following day took up a position within about a league of the walls of Rome, the whole being formed in three brigades as follows:—First Brigade, under General Mollière, on the right bank of the river about 3 miles from Rome. The Second Brigade, under General le Vaillant, about 1½ mile to the left of the first, and 2 miles from Rome on Via Porta Pertusa. The Third Brigade, under General Chadeysson, about 3 miles to the left of the second, and 2 miles from Rome. This brigade is just on the north side of the Civita Vecchia road. The headquarters are at Corviale, about 1½ mile in rear of the Second Brigade. Each brigade consists of about 6000 men of all arms, with 6 pieces of artillery, 4 French 8-pounders, and two 24-pounder Howitzers. The rest of the artillery, and six 24-pounder siege pieces, are at Maglianella, waiting for horses from Civita Vecchia.

"The reconnoitring party at Ponte Molle ascertained that an arch of the bridge was broken down, and that about 2000 troops from the provinces had passed and entered Rome a few hours before their arrival.

"M. Lesseps is still in Rome, and has sent word that he has but little chance of making a peaceable arrangement with the Romans; they are, or *appear to be*, unanimous in their determination to resist, and are daily strengthening their defences. General Oudinot, in the meantime, does not appear to be awaiting the result of M. Lesseps' mission. He is causing a bridge to be constructed at Fiumicino, which, when ready, will be towed up the river by a small steamer, and thrown across about 1½ mile below Rome. Of this he is in hourly expectation, and also of two 84-pounders and six 32-pounders, which are being disembarked from the steam squadron, and which he intends to work with a body of seamen in breaching the walls.

"It is impossible to say with any degree of certainty what is the plan of attack, although it is evident that he has fixed it in his own mind. The weak part of the walls is on the east side, and there an easy entrance might be effected. But the general is anxious not to act, or to appear to act, without the Neapolitans, who, if they attack, will do so on that side. It therefore appears probable that if hostilities are inevitable, the breach will be made between the Porta Pertusa and Porta S. Pancrazio, on the west side, and a brigade, crossing the river, may attack near the Porta S. Paolo.

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[1] Lord Palmerston, on this letter reaching him, signified to the Admiralty "that he considered Key's exertions for the safety of British subjects and property highly satisfactory." Sir William Parker characterised this letter as "equally intelligent and interesting."

"The French army, having continually received reinforcements from France, now consists of nearly 20,000 men. The line is at present very much extended, and if there was a watchful and disciplined enemy within the walls, they might cut off and destroy the Third Brigade. But General Oudinot has confidence in the inexperience of the Romans, and wishes to deceive them regarding his intentions.

"I cannot speak too highly of the conduct of the French soldiers towards the inhabitants of the country. Every article of food is strictly paid for, and their behaviour has engendered a very kindly feeling for them in the people with whom they have had intercourse.

"I have been received with the greatest courtesy and attention by General Oudinot, who has shown a wish to give me every information concerning the detail of their service, which appears so admirable in every respect that if I observe anything of which the knowledge may be useful to our military service, I will report it for your information.

"The Neapolitans remain at Albano.

"*P.S.—May 17th*, 6 p.m.—An hour ago M. Lesseps arrived from Rome, and brought information to the general, of which the result is an armistice; and it is now announced that the Triumvirate have resigned, and that Rome is to be delivered to the French."

"*Bulldog*, CIVITA VECCHIA,
"*21st May* 1849.

"The armistice, which I mentioned in my letter of May 17th as having been established between the Romans and the French troops, continued until midnight on Saturday, when, a refusal having been sent from the Roman Assembly to the terms proposed by M. Lesseps, the armistice was denounced by General Oudinot, and hostilities were nominally resumed, although negotiations still continued.

"The outline of the proposal drawn up by M. Lesseps is as follows:—

"1. The Roman States claim the protection of the French Republic.

"2. The Roman people have full right to decide on the form of their government.

"3. Rome will receive the French army as brothers.

"The service of the city is to be performed conjointly with French troops. The Roman civil and military authorities will continue to perform their functions according to their attributes.

"The following answer was given by the committee appointed to treat with the French envoy:—'The National Assembly regret that it is not within their power to accept the proposed terms, and confides to the Triumvirate the duty of explaining the motives of the refusal, and also of taking such measures as may facilitate a better understanding between the two republics.'

"These motives are not yet made public, but they are believed to be that the French insist on the exclusion of foreigners from having a voice in deciding on the form of government.

"Bologna, having surrendered to the Austrians, will probably influence the Romans in bringing the negotiations to an early close, according to the intention expressed in the answer of their committee.

"The French will undoubtedly have possession of Rome either by treaty or assault before the end of this week.

"It is positively stated that the Neapolitan army, commanded by the King in person, has retired from Albano to Velletri."

"*1st June* 1849.

"Since the date of my last letter no alteration has taken place in the position of the French army. Negotiations have been continued by M. Lesseps, and hostile preparations apparently proceeded with by the general; but evidently no decided step was contemplated before the arrival of fresh instructions from Paris.

"The policy of the Romans has not been so undecided. After various fruitless attempts on the part of the French envoy to persuade the Romans to admit General Oudinot and his army within the gates of Rome, on the faith of the three articles at first proposed, he consented (on the 24th ult.) to add a fourth article, which he appeared to think must convince the Romans of his sincerity. It was to this effect:—'The French guarantee to preserve the territory occupied by their army from foreign invasion.' This met with no better success. The Triumvirate say that the only terms on which they will allow the French army to occupy Rome are:—'A full recognition of the Roman Republic, and a promise to assist in the defence of the Roman States.' When this is ratified by the French Government, their gates will be opened.

"With reference to the 2nd article proposed by M. Lesseps, they state that the Roman people have already pronounced on their form of government, and that the present form—the republic—was unanimously selected by the inhabitants of the whole State on an appeal being made to their unbiassed judgment.

"The Romans are evidently aware that nothing decided will be attempted by the French until the opinion of the new National Assembly is ascertained; and they are so elated with the flight of the King of Naples to his own dominions, which they imagine they caused, and to which they certainly did contribute, that their confidence in their own strength has passed all reasonable bounds.

"The malarial fever has already made its appearance in the French army, and the season is now close at hand when their position will be untenable. If, therefore, an immediate attack is not decided on, they will be compelled to retire to Albano hills, the only healthy spot in the neighbourhood, and then transfer the base of their operations to Porto d'Ango; for this, General Oudinot has made a reconnaissance.

"*June 1st*, p.m.—A French steamer of war has just arrived from Toulon, bringing a telegraphic despatch from Paris for General Oudinot, of which I do not know the purport. Shortly before her arrival, Admiral Trèhouart had informed me that, owing to the increase of the fever among the troops, hostilities had been *bonâ fide* resumed; that an immediate attack on the Villa Pamfili (a commanding position close to the walls) and the church of S. Paolo was determined on, and thus probably an assault on the city in three or four days. It is not yet known whether the despatch from Paris will confirm or alter this determination.

"During my last visit to Rome, on the 26th ult., I made every inquiry among people of all opinions and of all classes to ascertain if the reports concerning the destruction of the monuments and the sale of works of art had any foundation, and I could not discover that any instance of the kind had occurred.

"The Austrian army is before Ancona, and is said to be on the point of attacking.

"*June 2nd.—P.S.*—The purport of the despatch which arrived yesterday for General Oudinot is to recall M. Lesseps, and to order the general to attack Rome without loss of time."

"CIVITA VECCHIA, *21st June* 1849.

"The French army have continued their operations under the walls of Rome without intermission since my last letter.

"On the 12th three batteries were in position in the second parallel, directed against the salient angle of the walls to the right of Porta Pancrazio, at the distance of about 100 yards, each consisting of four 16-pounders and two 24-pounders, with three 8-inch mortars in the rear of the right battery. General Oudinot then wrote a final address to the Romans, calling on them to save Rome from destruction by admitting his army within the city. They refused. On the morning of the 13th he opened fire on the walls, and by the 16th he had succeeded in destroying the upper part of them to about one-fourth from the top, when they found that their guns would not damage them below that, owing to some rising ground intervening. It was therefore determined to continue their works, and construct a third parallel in which to place a battery within 50 yards of the walls. This was completed on the 20th, twelve guns being in position.

"The Romans keep up a constant fire on the trenches of shot and shell, not causing a severe loss, but sufficient to retard the works and harass the French soldiers unceasingly.

"On the 15th the Romans made a sortie with 2000 men, for the purpose of regaining Ponte Molle; they were driven back by 700 French, leaving between 50 and 60 dead.

"The French have cut off the water that enters Rome by aqueducts on the north and west sides, to deprive the inhabitants of the use of the mills which are worked by it; they have destroyed the Ponte Solara across the Anio, and endeavour to prevent provisions from entering the town. This they can hardly effect, as the south side towards Tivoli and Albano is entirely open.

"The fever caused by the malaria is not on the increase; indeed I believe the health of the troops is improving; but the fatal season is close at hand.

"Reinforcements from France have completed the army to 30,000 men, with 30 heavy siege guns and 40 pieces of field artillery."

"CIVITA VECCHIA, *2nd July* 1849.

"Since the French obtained possession of the breach, as I mentioned in a private letter to you of June 22nd, they have been occupied in strengthening and arming the work which they had constructed inside it. The Romans kept up such a constant and well-directed fire from those batteries which commanded this work, that General Oudinot deemed it advisable to dislodge them by artillery before attempting to advance. On the 28th he opened fire on them from 35 pieces which he had established at the breach. By the evening of the 29th he had effectually silenced the Roman guns, and on the following morning advanced, and carried at the point of the bayonet a bastion on his left, from which he had received most annoyance. After killing 250 of the Romans, making 130 prisoners, and spiking 13 guns, the French retired to their original position at the breach, not deeming it advisable to hold the bastion, as it was commanded by many points in possession of the Romans.

"On the evening of the same day (June 30th) the National Assembly in Rome came to the following resolution:—

"'In the name of God and the people, the Constituent Assembly declare that further resistance is impossible. The Assembly will sit in permanence. The Triumvirate is charged with the execution of the present decree.'

"This was sent to General Oudinot, with a request for a suspension of hostilities; and at the same time a deputation of the municipality of the city arrived at the headquarters of the French army.

"Whether this decision is the result of their ammunition being exhausted, of their courage failing, or of their good sense coming to their aid, I have not yet ascertained; but it is the universal belief that Rome will be entered peaceably without delay.

"M. Corcelles, the successor to M. Lesseps, who has been waiting at Civita Vecchia until his powers might be called into action, has gone to headquarters under the walls of Rome."

The fall of Rome had the effect of placing Key in an exceedingly difficult position. Most difficult and delicate in consequence of the old and warm friendship which existed between himself and the French Admiral Trèhouart. The result was, that on the 6th of July the *Bulldog* sailed with three refugees and arrived with them in Naples Bay next day. I will let him give his own account in a letter to Captain William Martin[1] of the *Prince Regent*, the senior officer at Naples:—

"On the 2nd of July the French army entered Rome, the general having refused to guarantee the safety of the foreigners who had assisted in its defence, and endeavoured to obtain possession of MM. Mazzini, Avezzana, and Garibaldi. The latter escaped with a body of 8000 men, and was instantly pursued by a division of the French army. On the 4th, General Avezzana found means to escape from Rome, and, arriving at Civita Vecchia, begged me to afford him a refuge. I did so. He came on board the *Bulldog* unknown to anyone at Civita Vecchia, having brought an American passport. There was no prospect of an opportunity offering of either sending him to Malta or of putting him on board a United States ship of war. The general being *bonâ fide* an American citizen, I would not attempt to keep him concealed; and had I remained alongside the French admiral, I could no longer have maintained that cordial intercourse with him which has hitherto been my endeavour.

"I was aware that the U.S. frigate *Constitution* was lying at Naples; I had before informed the admiral that, being short of coal, I should probably be obliged to go to Naples as soon as Rome was occupied by the French. I had thus an opportunity of placing Avezzana in safety without leading the French to suppose that the *Bulldog* was stationed at Civita Vecchia with the intention of protecting those whom they consider deserve to be punished for having aided the Romans in making so prolonged a resistance.

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[1] Afterwards Admiral Sir William Fanshawe Martin, G.C.B. Died in 1895.

"I have been induced to make this explanation,—first, to account for my leaving Civita Vecchia; and secondly, because I am aware it is not becoming in a British man-of-war to take part in a concealment of any description, and I trust it is the last time I shall ever have occasion to do so."[1]

Some side lights and summaries of the striking situations in which the young commander found himself are given in his private letters written about this time. Thus, on the 12th of May, he writes:—

"This last week has been an eventful week for me. I was sent to Rome to extricate our countrymen from that city, which was on the eve of an attack by the Neapolitan and French armies. The latter had just received a reverse as I arrived. I had some difficulty in getting through the camp, which was interesting beyond description, but got to Rome, and succeeded in getting the English away. *In one day* I had long and interesting interviews with the French General Oudinot, Mazzini the celebrated republican, and the King of Naples, each ignorant of the other's intentions, each at the head of armies on the eve of an encounter!"

On the 18th of May he says:—

"I have been bivouacking with the French army for the last week, and have not had my clothes off. It has been the most interesting scene I have ever witnessed, and I believe it is what no Englishman beside Lord Napier (who is with me) and I has ever seen. We are with the general, who shows me every attention, as he knows that I am sent to report on his proceedings and to pick up information relative to the French army. . . . The army is now raised to upwards of 20,000 men, and the perfect arrangement of every branch cannot be surpassed. It has given me an insight into the French character which I could not have gained elsewhere. Generals, officers, and men live together like one large military family. During the eight days I have been with them under all circumstances, I have not heard one harsh word or seen one angry gesture from officer or man; all is cheerfulness and gaiety; no selfishness, and an entire absence of affectation. The officers are manly and frank; inferior in education and intelligence; but honest and truthful. We sleep in a stable, wash in a soup plate, and eat eggs with a cork-screw; but every minute has something new. Strange to say, I have not found *one* republican in the French army or navy. All are something else—they know not what, but they do not wish the republic to last.

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[1] The Commander-in-Chief, and afterwards the Admiralty, approved of Commander Key's proceedings, "under the peculiar circumstances in which he was placed." The general question of receiving political refugees on board H.M. ships is of such importance that I venture to quote letters of Sir William Parker of this date, and which seem to have been written partly in consequence of Key's proceedings. We have already been made acquainted with the general terms under which refugees were received on board H.M. ships at this time. In a letter to Captain William Martin, Sir William Parker particularises:—"You should avoid taking any person from the shore in the boats of H.M. ships, unless the party has peculiar claims connected with English privileges which, on a recommendation from H.M. minister, might justify the act. You cannot, however, err in receiving for protection any individuals whose lives or freedom may be endangered for any act purely political, provided H.M. minister applies to you in writing that they may receive the protection of the British flag, and in such terms as will attach the responsibility of the measure to His Excellency.

"It would be derogatory to our flag to deliver up any individual who may have been admitted on board for protection under such circumstances, but I think you would be bound to quit the anchorage with Her Majesty's ship if required to do so by the Government of the country, on the grounds of your having on board any political offender of the nature adverted to." In a letter of near the same date (3rd of August 1849), Sir William Parker points out to Commander Key, that the number of refugees already congregated at Malta made additions objectionable, and that he was to be "cautious not to receive on board any foreign refugees except under very pressing circumstances, where he had reason to believe that their lives are actually in danger for political acts unconnected with any conduct of a felonious or criminal nature."

"As my father mentioned in his last letter, I have received a very satisfactory approval from the Admiralty, in a style which the admiral tells me has never before been sent to a captain in his squadron.[1] He told me more, which I will not now mention, as it may not prove correct, but I have every reason to look for my promotion very shortly. . . .

"You cannot imagine anything more beautiful and picturesque than the view we have from our present position. Just out of gunshot of the walls of Rome, on the west side, on elevated ground, so that we can easily distinguish the different monuments and public buildings; and at night, the large watch-fires, with the different groups of soldiers round them singing and laughing so cheerfully. And the thought that there are round us 20,000 men all bent on one object, and occupied probably with the same thoughts, completes a scene that surpasses anything I have ever witnessed, and imagined only existed in romances or in days long past."

While Key is thus full of his active outer life, it is pathetic to note the trouble ever at his heart. His powers of throwing off, in appearance, a wearing sorrow must always have been considerable, but, as he wrote in this very letter, "The more exciting and interesting occupation I have, the more do my thoughts revert at every spare moment to one subject."

From Naples the *Bulldog* was ordered to Malta, and was there from the 9th of July till the 3rd of August, having been in dock and under repair. She was back at

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[1] This must refer to the letter of approval of his proceedings at Catania, noted on p. 192, which was dated 2nd of May. The Admiralty's language may not seem to justify what is here said of it. But it is traditional with the Board to be very sparing of praise, and the words imply higher approval than they seem to do.

Civita Vecchia on the 11th of August, and the following letters complete the series written on the Roman question:—

"Civita Vecchia,
"*22nd August* 1849.

"The proceedings of the French in Rome since my arrival at Civita Vecchia offer but little of interest.

"General Oudinot has been recalled from the command of the army, which on his departure will devolve on General Rostalon, the next in seniority. It is General Oudinot's intention to proceed to Naples before his return to Paris, and it is said that he leaves Rome to-day. Many reasons are circulated to account for his recall, but it would appear that his military services being no longer required, is sufficient, especially as they profess to be on the point of withdrawing part of the army from Rome. However, the general himself is not well pleased at it.

"The triumvirate of cardinals, who now execute the temporal functions of the Pope, have shown so decided a tendency to return to the system of government which existed even before the present Pope's election, that the Roman people are beginning to look on the French as their only hope, and their intercourse with them is gradually becoming more cordial. General Oudinot, who is a strict Catholic and religious man, was deemed by the Romans to be too much under the influence of the Pope to offer a remonstrance to any measures which the cardinals might see fit to adopt; his recall is therefore pleasing to the people.

"The most obnoxious acts of the ecclesiastical triumvirate are:—The decree reducing the value of the paper money, and the establishment, on the ancient bases, of the Inquisition, and Vicar's Tribunal, which, though nominally only for breaches of ecclesiastical law, are used to punish political offenders; and an order lately issued to restore all property which formerly belonged to these establishments will render them as powerful as before. In fact, the little that has been done since the return of the Papal authority does not show a symptom of a return to a constitutional form of government, or a relaxation of the old Gregorian ecclesiastical system.

"I am informed that the detestation of the cardinals and priests, and a dread of their return to power, is openly expressed by the Roman people of all classes; but they do not show any dislike to the restoration of the Pope's temporal authority if unaccompanied by them, and of this His Holiness is kept in ignorance.

"Rear-Admiral Trèhouart has removed his flag to the steam sloop *Narval*, and occupies the Papal residence at Civita Vecchia, where he will remain during the autumn and winter, as he does not consider the port safe for the steam frigates."

"Rome, *September 1st*, 1849.

"Since the transfer of the command of the French troops to General Rostalon, more cordiality is visible in the intercourse between his soldiers and the Romans.

"This is attributed in a great measure to a letter (of which I enclose a copy) addressed by the President of the French Republic to M. Ney, the envoy of France at Gaeta; this letter, at the request of the cardinals, has not been published, but its contents are generally known; it is interesting, being the first document which has emanated from the French Government in which their intentions regarding the Papal States are intelligibly expressed. The general-in-chief has likewise personally gained the confidence of the Roman people, by assuming a higher tone in his communications with the Papal Government, and by having, when inspecting the prisons, insisted on the release of several persons who were in confinement for slight political offences. He has stated in a late proclamation that he is making arrangements for a 'more complete occupation of Rome than was first contemplated'; and it does not appear that the withdrawal of any part of the army, as stated by General Oudinot, will take place.

"Rear-Admiral Trèhouart has despatched his late flagship, the *Labrador*, to Naples to convey General Oudinot from there to Toulon; she will not return to Civita Vecchia during the autumn and winter months. The admiral is employing machines for deepening the inner harbour, which will make it accessible and secure for vessels drawing 15 feet of water.

"The Spaniards are retiring towards the Neapolitan frontier; a detachment of 4000 men have been, until lately, quartered at and in the neighbourhood of Rieti, and others at the principal towns between this place and Velletri. It is said that they now intend to establish their headquarters at Frosinore."

It was at Rome, early in September, that Key received the sad news of his father's death. All his letters show how passionately devoted he was to him, and this apparently sudden loss produced the most bitter reaction. His family, for reasons appearing to them sufficient, had opposed obstacles to the fulfilment of the son's wishes; and though there is no trace in any letter of a word which might not be properly said under such circumstances by a son to a parent, Key's affectionate nature was torn with a remorse which a colder one could not possibly have felt. Yet still the public duties were unintermitting, and probably no one meeting the man on business could have imagined the soreness of his spirit.

The *Bulldog* left Civita Vecchia, not to return again, on the 5th of September. She proceeded to Naples, towed the *Prince Regent* out of the bay and through the Straits of Messina along the south coast of Sicily, leaving her at sea on the 8th, and returning herself to Messina the same morning.

There was at this time a peculiar attraction in the *Prince Regent*, as her captain—Wm. Fanshawe Martin, before mentioned—was the father of a new school. The principles on which the *Prince Regent* was governed were different from those obtaining in the *Hibernia*, Sir William Parker's flagship, and it was understood by the navy of that day that the new school was in the ascendant.

The younger officers possibly only recognised a stricter discipline, not perceiving that what was aimed at was the establishment of public spirit and impersonal government afloat. The old school, handed down from the great war time, left every ship almost a separate navy, chiefly governed by the personal views of her commander. Captain Martin was beginning, in the *Prince Regent*, that establishment of the reign of a general naval law, running in all ships alike, which he was able to consolidate as First Sea Lord of the Admiralty at a later time, and to illustrate so magnificently in the *Marlborough*, the Mediterranean flagship, still referred to as the pattern which all well-ordered ships should strive to imitate.

The kindness of Sir William Parker came as a relief in sending *Bulldog* cruising round the ports of Sicily, so as to give her commander plenty of occupation, and he was further consoled by the numerous letters of sympathy from all quarters, and chiefly from those who had known and respected his father.

The reaction having everywhere triumphed in Italy and Sicily, political interest in the Mediterranean travelled eastwards. The Ionian Islands were in more or less commotion, and thither Sir William Parker took his squadron early in September, and there received news which foretold the orders he subsequently received to proceed with the fleet to the Dardanelles. On the 28th of October the ships anchored in Besika Bay.

The *Bulldog* followed later. Key was at Naples on the 6th of October, where, he says—

> "I am again the witness of horrors. This ill-advised King of Naples is arresting everyone who took part, or is supposed to have wished to take part, in any of the disturbances which have taken place since January '48. Forty thousand (!!) have been arrested. A reign of terror exists. No one on going to bed feels sure that he will not be in prison before morning. A 'Judge Jeffreys is appointed for their trial, which will take place in a few days. We can do little to alleviate this, but we do that little."

On the 26th of October *Bulldog* was off Corfu, when Key wrote—

> "I am now on my way to join the admiral, who is probably by this time near the entrance of the Dardanelles. I shall perhaps have an opportunity of visiting Constantinople before I leave the Mediterranean. I do not anticipate a brush with Russia. The Czar has not yet committed himself, and I imagine will not, when he sees the attitude France and England have assumed. I am particularly glad, however, to be with the commander-in-chief at such a moment. I always hoped that he would not leave me in the lurch if there was a chance of anything to do."

On the 31st of October the *Bulldog* arrived at Besika Bay, and found there the *Queen* (which had succeeded the *Hibernia* as Sir William Parker's flagship), *Howe*, *Caledonia*, *Prince Regent*, *Powerful*, and *Vengeance*, all sailing line-of-battle ships differing only in degree from those of the war time; and one steamer only—the *Rosamond*—to represent the revolution which was approaching so much more rapidly than anyone was aware of. This *Rosamond* had been the *Eclair*, which I remember to have seen lying at the Motherbank with the black and yellow quarantine flag flying. She had hurried home from the West Coast of Africa with a devastating outbreak of yellow fever such as at the present day it is impossible to realise. It was hoped that cleaning, disinfecting, and changing the name, might leave the ship efficient for service, but fever was in her timbers, and broke out amongst the crew, so that she had to be put out of commission for good. The arrival of the *Bulldog*, *Tartarus*, and *Ardent* raised the steam force, but still left it insignificant.

This concentration of British force, which it was expected would soon be allied to considerable French force, was undertaken with the view of supporting the Porte in its refusal to deliver up the political refugees from Hungary, after the suppression of its insurrection by the troops of Austria and Russia. It was thought desirable to enhance the moral effect of the display by a closer approach to Constantinople. So, in breach of treaty as it appeared, the squadron weighed on the 1st of November, and took up a new anchorage inside the outer castles of the Dardanelles. Conciliation then became the order of the day, the independence of Turkey was secured, and the British fleet returned to Besika Bay on the 13th.

Key was now employed in examining suitable anchorages in the Archipelago, assisting in towing the flagship from point to point, and other like services. He was also called on to make a report on the possibility of holding the Peleponnesus, which he thought might be difficult against superior forces, but he did not take account of the capabilities of the fleet to flank the defences.

It is useful to recall the fact that, in the orders given by Sir William Parker for the examination of possible anchorages, the greatest stress was laid on the probable fresh-water supply, possibilities of sinking wells, convenience of boats embarking it, and so on. It is useful to remember that this question of watering—which has ceased to be a question—was then just as it had been for all the previous centuries. Casks were landed, rolled up the beach, filled, and rolled down the beach, and "parbuckled" into the launches. Watering "in bulk," in the great canvas tanks, of which the introduction was due to the captain of the *Prince Regent* as already mentioned, had scarcely, if at all, taken root, but just about this time the distillation of water was making slow headway in the latest types of steamers as an experiment. One of them, the *Reynard*, was then cruising in the China Seas with such an apparatus on board.

It was now pretty certain that the *Bulldog's* commission would not be much longer extended, but the orders for home were slow in coming. Key writes of his prospects from the Bay of Xaros (Saros), under date 9th December—

> "I think I told you in one of my late letters that you might hope to see me on Xmas Day. By this you will see that there is little possibility of it. In fact, the admiral tells me that he has orders about sending several ships home which are a shorter time in commission than *Bulldog*, but he has not a word concerning us; and then he adds something complimentary as a salve. But he need not do that. I am ready to remain out as long as the Admiralty think proper to keep us; and now I should not be surprised if we remained until the spring, to see if the Queen keeps to her intention of visiting the Mediterranean, and we may accompany her. . . . I am gaining experience in my profession, though not very agreeably now [he was alluding to the shockingly bad weather the ships were

experiencing at this time], but yet I do not see why I should say that; I suppose it is from having people grumbling round me."

Again, on the 21st, he says—

"I cannot tell you with what pleasure I look forward to joining you all. Not that I am anxious to leave my dear ship, of which I am more fond than ever, but I have been a long time away. Indeed I should be very ungrateful if I wished to leave all my kind friends in the squadron. The admiral, especially, treats me with more kindness and confidence every day. We left Besika Bay about a week ago, as the admiral did not consider it a safe anchorage for the fleet in the winter, and we are now snugly moored in this anchorage (inside Mitylene). He, however, expects to leave for Malta in the course of ten days or so, and then, he tells me, he will have to send me home soon after—that is, in the course of three or four weeks."

In this letter Key gives expression to an opinion which perhaps only a few people hold—

"I have always thought that a virtuous attachment in early life tends to purify a young man, besides giving him an object to work for."

The following illustrates some of the troubles of command, the power possessed by officers commanding ships in those days, and the philosophical examination to which Key was accustomed to submit his acts and their motives—

"I have just been obliged to perform a very distressing duty. A young man, a midshipman, nearly 18 years old (just as I was in *Cleopatra*), was put into my ship, by Captain C——'s especial request, from the *R*——, who gave him under my charge with a good character. His friends have written to me frequently about him, and I have been able until lately to give a favourable account of him to them. However, two days ago he in a barefaced manner refused to obey my orders, so I have been obliged to have him discharged from the service and sent home, which I have just communicated to him by the commander-in-chief's order. I could not pass it over. Is it not hard that one's duty compels such a painful course? But what I find worse is this: although I do not hesitate as to what course to follow, as duty points but in one direction, yet I begin to doubt what motives urge me to my duty in this and similar instances. I remember, when I was this lad's age, I committed many acts for which I should have been dismissed the service. Duty then did not keep me straight for conscience' sake. Why, then, do I feel it now so easy to keep in the right path? I fear . . . it is selfishness. It is my interest to do my duty and to make others do theirs. This is a painful avowal, but is in a great measure true."

Key's mind was a remarkably open and unbiased one, but he was not always aware of the fact himself, and sometimes overdid it in distrusting his motives. It is plain enough that, in his early as well as in his later life, self-interest had its proper and legitimate influence, but not more. And he forgot, in so judging this young man and himself in time past, that if self-interest swayed, it would certainly have prevented such contretemps. Age had brought wisdom and self-control as a sequence to wisdom. It was an appreciation of the general fitness of things which was operating in Key's mind, and failed to operate in this young man's. In a minor degree the difference arose from the habit in the navy of making the service of the juniors a personal rather than a public one. The young naval officer of those days looked upon doing or not doing his duty chiefly, if not entirely, as a question of pleasing or displeasing his superiors. It was their will he was obeying, and not the public will. Consequently sentiment and temper operated more largely than logic or reason, and we had bad results, which are in the present day much minimised.

The presence of the squadron at the entrance of and inside the Dardanelles had so well fulfilled its object that Sir Stratford Canning was able to write to Sir Wm. Parker, on the 1st of January 1850, pointing out that the state of the Russo-Turkish relations freed the British Fleet from the necessity of further service in Turkish waters. It had been prearranged that, when the Constantinople difficulty was surmounted, Sir Wm. Parker should proceed with the fleet to Salamis Bay. The object was to support Mr. Wyse, our minister at Athens, in certain demands upon the Greek Government, including that special demand, on behalf of Don Pacifico, which gave a name to the whole transaction, and created such a stir in the political world. I will let Key's letters tell the story from the *Bulldog's* point of view. He dates first from Salamis Bay, 15th January 1850—

"We are thus far on our road to Malta. We left Moskomisi with the squadron on the 8th, and arrived here on the 11th, having had some very nasty weather on our passage, which is not very pleasant during these long dark nights, with no moon, and a squadron of nine line-of-battle ships cruising about among islands. However, we have happily escaped without any disaster. We are placed in quarantine here for three days, after which the admiral and British minister, Mr. Wyse, have some trifling accounts to settle with King Otho, which will occupy a few days, and then we return to Malta. The admiral told me yesterday that almost immediately on our arrival he would be obliged to send us to England, as he has heard from the Admiralty that orders to that effect would reach him in a few days. I cannot therefore be home much before April 1st. . . .

"It seems so strange to me being at this place again, where I have not been since I was rated midshipman in the old *Russell*,—in October '37 I think it was. If you happen to have any of my old letters of that time, see what I say of this place. I remember being enchanted with the pretty Queen of Greece, Amelia. I shall see her again in a day or two. Our business here now is connected with the Greek loan, which they still refuse to pay, but to what extent we intend to interfere I do not know."

The next letter is from the *Piræus*, under date 28th January 1850—

"Here we are again, . . . involved in another squabble with a paltry State, one that would seem to be too insignificant to quarrel with. As I told you in my last letter, Mr. Wyse, the British minister, waited for the arrival of our squadron to press on the King the necessity of settling some long-standing demands which had been made on him for the outrage and robbery of sundry British subjects. These demands H.M. positively refused to accede to, having been carefully instructed on that point by the French and Russian ministers. Mr. Wyse gave him twenty-four hours to think over it, and, strange to say, during this time for deliberation we dined with the King, on his invitation of the previous day. Both the King and Queen were very affable, and tried to make themselves agreeable (which, by the bye, is not easy).

"The next day at 3 p.m. we took possession of all the Greek vessels of war in the port. I chased and brought in a steamer. Mr. Wyse embarked in the flagship, and, a day or two after, an embargo was put on all Greek merchant vessels. The most serious feature in the affair is, that the French minister has protested in no very civil terms against our proceedings, and the Russian has followed his example. This, if originating with himself, is nothing, but it appears to be the result of instructions from his Government, and, if so, shows a determination to quarrel with us, which we certainly shall not *avoid*. However, this is not yet certain. But we are—that is, Lord Palmerston is—prepared not to allow any foreign Power to meddle with us in the question; it is entirely a private affair between ourselves and Greece, and will be arranged as such. The admiral has now determined to make reprisals,—that is, to take possession of merchant vessels to the amount of £4000, which is the sum due.

"I am now taking in coals and preparing for sea, as I shall sail to-morrow with *Firebrand* for Syra, the most important Greek port, and there select some valuable vessels and bring them here. This is likely to keep us out from England a little longer; but I feel convinced the French Government will throw over their minister, and then Otho, finding himself unsupported, will give in. This minister has written to Smyrna to request the French admiral to bring his squadron here, but I think he will not come.

"We have had the most dreadfully cold weather which has been known in this part of the world for years. Snow a foot deep on our decks for three days; thermometer at 16°. . . .

"The admiral has at last actually received orders to send *Bulldog* home. We shall call at Port Mahon on our way, and proceed to Spithead; and nothing now detains us but this pig-headed King.

"I cannot tell you the pleasure I derived from visiting the Parthenon, Jupiter-Olympus, etc., after having seen so many Grecian and Roman monuments and temples in Italy. The Parthenon stands as high above every other artificial structure in the world, as the Apollo Belvedere and Venus di Medici above other sculptured conceptions of human beauty."

From the 18th of January, when *Bulldog* first took part in coercing Greece, until the 9th of March, when she finally left Salamis Bay for Malta, Key had scarcely a moment's rest. Either alone, or in company with other ships, he was in and out of one Greek port or another on most days, capturing Greek ships, towing here or there, chasing and examining ships at sea—

"I have been so overpressed for the past few days," Key writes on the 18th of February, "with anxiety and responsibility, that I am not in a fit state to write. I arrived here (at Salamis Bay) this morning after encountering dreadful weather, and, as I sail again to-morrow, the admiral monopolises all my time. I am now just going to dine with him. He is rather annoyed at the unjust strictures made by the *Times* on his proceedings here. The people of England are talking, as usual, in entire ignorance of the facts; and before they pass absurd opinions they had better wait till they know *what* has been done, and *why*. He has received fresh orders to send me home, but he says he will not do so until matters are a little smoother here. Two additional steam sloops have joined the squadron during this week, *Growler* and *Scourge*. The admiral has therefore now more steamers than he knows what to do with."

But *Bulldog*'s time was up: she sailed for Malta on the 9th of March; arrived there on the 11th; left again on the 18th; touched at Port Mahon, at Gibraltar, Tangier, and Lisbon, on the way home. She arrived on the 7th of April at Spithead, and was paid off at Portsmouth on the 16th—

"I parted yesterday," wrote Key on the 10th of March, "with my kind commander-in-chief, and the whole of the squadron, with very great regret. The good feeling of the captains and officers of the fleet towards this ship was testified very warmly and universally. My head is in a whirl. . . . I have so much to think of, and to do, before I arrive in England; and I fear I shall have to fight for my promotion."

Thus ended a division of Key's career, which is scarcely exceeded in interest and importance by any other part. It is an example of the influence which may in troublous times fall to the lot of any young naval officer.

But, varied and important as it was, tradition in the navy prevented his work from occupying its true position; and as regards Key's promotion, it is quite possible that it would have come as soon as it did had his time in the *Bulldog* been absolutely unmarked. Had he by any chance been under fire for five minutes, his promotion would have perhaps come out by return of post. For tradition in the navy has long apportioned rewards not by what is done, but by what is suffered, or supposed to be suffered.

The very active and bustling life which Key passed in the *Bulldog* naturally forced his mind away from those ideas of improvement and progress, especially on the material side, which I have shown to be in its normal direction. Activity was, however, not wholly able to destroy reflection, and he wrote two papers, while he was in the thick of his missions in Italy, which are valuable not only as illustrating character, but as marking the general condition of the naval mind at the time, and as denoting the source from whence some of the great changes of our own day have been derived.

The first paper discussed the armament of the *Bulldog*, and complained of her inability to fire a single gun, either ahead or astern, absolutely in line with the keel. He proposed to obviate this by a new arrangement of fighting bolts, so that existing guns might be moved, if desired, from a position allowing of fire nearly in line with the keel, to one allowing of fire exactly in line with the keel. Then the thought carried his mind a step further, and he began to talk of "the useless broadside guns" in the event of an attack either ahead or astern, and of the desirability of transporting them to positions at bow or stern. The proposal made on this head was to supply the *Bulldog* with an additional 10-inch pivot gun on the starboard side forward, and one on the port side aft, with a 32-pounder on the opposite side; arrangements being made for transporting the 10-inch guns to fight at bow and stern beside the two existing guns already pivoted there.

Comparisons were drawn between the *Bulldog's* probable fire ahead and astern and that of some French ships, and a number of details were gone into, but the desire for a heavy right-ahead and right-astern fire dominated. Here, however, came out a characteristic defect in Key's mental methods. The necessity for preparing to fight in a way that we never had fought was assumed. Not a word was said to show why a change in the method of fighting was to be expected. The analogy of sailing vessels was brought in to show that steamers need not expect to be engaged on both sides; but analogy was tacitly denied when it showed that steamers did not require to be armed to fight ahead or astern any more than sailing ships did. The argument never seems to have presented itself to Key's mind; and while, if it had, the clearness of his view and its logic would have followed it up, the fact left him to cling tenaciously to this early formed opinion. This paper must have formulated one of the earliest demands for end-on fire, and fifteen years later we shall find him pressing it.

The second paper bears date at Malta, in July 1849, and is a reply to Admiralty criticisms on his former letter; but it deals with details, and does not touch the initial question of whether the great additional manœuvring power conferred by steam was not an argument against, instead of in favour of, transporting guns from point to point within the ship. Whether steam did not rather demand the greatest possible fire in one or two directions only, leaving it to the power of steam manœuvring to keep the enemy in those directions?

Another paper, written about the same time, was a criticism of a letter from Rear-Admiral Sir Charles Napier to Lord John Russell, which had been published in the *Times*. Sir Charles had referred to the steam force of France, setting out that it was "at once an object for us to dread, and an example for us to follow." Key wrote semi-officially to the Permanent Secretary to the Admiralty, Captain Hamilton, as having known personally the performances of the French ships in their descent upon the Roman coast, and being likely to give correct information. He had no hesitation in condemning the French ships that Sir Charles Napier praised, and he went into some general considerations disclosing perhaps the general view of the time on naval strategy, which may be quoted—

"On discussing our military resources, and especially an untried arm like our steam navy, it would appear necessary to speak of it only as compared with that of other nations; but as France and England seem to have different objects in view in the organisation of their respective steam forces, we may, leaving France to follow her own inclinations, speak of the services likely to be required of ours. These will probably be, to protect our coasts; to cruise with fleets; to afford convoy to merchant ships (assisted by frigates);[1] and to carry despatches. I think I may safely say that although vessels for any of these duties should be armed perfectly, and as heavily as is compatible with their correct performance of them, and though cases may frequently occur in which, by skilful management, a steamer may, unaided, execute some important service, yet the primary object of these vessels, whose chief motive power is the engine, is not that of offence.

"For the perfect performance of the duties mentioned, it would perhaps be required to appropriate a class to each; but the expense would be very great, and it would be unwise to disable vessels from executing other services than that immediately required.

"It appears to me that two descriptions of vessels would be sufficient, viz.: ships with a broadside force like *Blenheim*, *Arrogant*, etc., with the auxiliary screw; and steamers (with either paddle or screw), varied in size, rig, and build, but trusting to the engine as the chief motive power, and armed with *the special object of attack or defence by the bow or stern.*

"Sir Charles complains that we have but three steam frigates.[2] I will not refer to the merits or demerits of particular ships; much improvement is needed there; but I wish to show that the classes of steamers established for the navy are those which are best calculated to perform well the duties required, if their construction is properly attended to. With due deference to Sir Charles, may I ask him to point out *one* service in the performance of which a steam vessel with a broadside fire excels?[3] May I also ask what service a well-constructed steam sloop cannot efficiently and economically perform? By the term sloop, I mean to imply all vessels armed only on the upper deck."

Key goes on then to declare that the power of the *Sidon* and *Terrible* is wasted. The *Terrible* would not be a match for the *Arrogant*, though she probably cost far more. For all services that the *Terrible* might be available for, two paddle sloops would be more available.

It might seem remarkable to find a naval officer of decidedly advanced views arguing in this way, as if the signs of the times pointed to a navy composed of (1) sailing ships of all classes; (2) auxiliary screw ships depending mainly on their sails; and (3) small paddle ships of high power depending mainly on their steam. But, though Key was distinctly advanced, he did not escape the traditional bias of naval thought. To make the best of what comes into their hands is of all things the strength of natures trained in the navy; but it has its bad side, inasmuch as it closes the eyes to what is coming until the moment of its arrival. The incongruity of a navy in three branches, and the impossibility that they could co-exist, spoke to no one. Attention was diverted from watching the advance of the new element, to the idea of perfecting the old; and though the steps in warship design were perfectly well marked on a certain path in the ships that were being laid down and launched, the foremost minds in the navy failed to take note of it.

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[1] That is, sailing frigates.

[2] That is, steam frigates depending chiefly on their steam—paddle ships of the *Terrible*, *Odin*, and *Sidon* class.

[3] He probably means a paddle steamer, as above, considering that the screw was irrevocably fixed to auxiliary power only.

The naval desire is to support what it has; and so Key, finding paddle steamers chiefly armed at bow and stern, seeks a reason for maintaining them which had nothing to do with their establishment. When finding a reason in the idea of a bow and stern battle, it does not occur to him that he should show how such a battle can arise, nor that he should explain why it had never arisen except by compulsion of the armament, as in the days of galleys. He becomes so carried away by the confusion of cause and effect, that he goes so far as to say "that in general a broadside battery is a useless armament to steamers."

But then, he soon escapes from a confusion of thought into a clear atmosphere, which, had he only been able to breathe it for the rest of his naval life, would, I am convinced, have left his name in a higher position in the naval world.

He concludes the paper thus: "And, finally, it is holding us rather cheap to warn us of the danger England incurs from the power France possesses of conveying 30,000 troops to Rome in six weeks, which, though skilfully accomplished, has convinced me that our countrymen may sleep in peace as long as we have our present steam navy to watch over our friends *on the other side of the Channel*."

No doubt Commander Key had, as he supposed he would have, "to fight for his promotion." New orders had been issued, in December 1849, with regard to officers obtaining what were called "steam certificates," which were held to qualify them for the command of steamers. Any officer might present himself on the quarterly examination days, and pass the examination if he could; but the usual course was to apply for an appointment on half-pay to the Royal Naval College at Portsmouth, and, after a course of instruction there, the candidate was transferred to the steam factory in Woolwich for a practical course before presenting himself again at Portsmouth for the final test. Quite possibly, Key might have begun to despair of his promotion, as month after month passed on without its coming; and he might have thought that he would keep himself to the front by offering to undergo the new examination. At anyrate, he applied to be appointed to the College, and joined as a commander in September 1850. But he was promoted to the rank of captain on the 11th of October 1850, and continued to study in that rank. He was there in February 1852, and passed his steam examination.

In November of that year he was sent on a confidential mission to report upon the naval condition of France. He visited most of the dockyards, and made a long report upon them, and on the working of the *Inscription Maritime*, the draft of which remains among his papers. On his return he seems to have spent his time at home and on half-pay.

CHAPTER XI

THE *AMPHION*—1853–1854

ON the 27th of June 1853 the *Amphion*[1] was lying at Spithead, having arrived there on the 21st, when, on striking lower yards and topmasts, and swaying the main topmast in order to get the fid out, the hook of one of the top-blocks broke, and the broken piece fell directly on Captain Patey's head, seriously injuring him. He was sent to Haslar Hospital next day; it became necessary to provide for the command of the ship, and Captain Key, being on the spot, was appointed to act in temporary command until—as it was hoped—her proper captain should be able to return.

That good fortune which attended Cooper Key like a shadow was here again with him. He had not been three years a captain; his name was only forty-fifth from the bottom of the list, and there were only four men below him who were in employment. These were Tarleton,[1] flag-captain to Commodore Lambert, in the East Indies; Crispin,[2] captain of the Queen's yacht; Hyde Parker,[3] captain of the *Firebrand*, in the Mediterranean; and Fishbourne,[4] of the *Hermes*, who had been specially promoted from commander to captain of that ship for services in the Kaffir War.

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[1] The *Amphion* had been ordered to be built as far back as 1828, under the name of the *Ambuscade*. She was not commenced till 1830, and was intended to be finished on the lines of the *Castor*, when it was determined to turn her into a screw ship; she was still on the stocks, and, before launching, she was lengthened 16 ft., and her stern was altered to take the screw. She was launched therefore as the first of the screw frigates in January 1846. Every part of her, and all her fittings except the engines, boilers, and screw, was the same as in an ordinary sailing frigate, but her armament was modernised later. Her length was 177 ft., her beam 43 ft.; and, according to the old method of measuring tonnage, she was counted as being 1473 tons burden in 1846, and, according to what was then the new method of measurement, she stood at 973 tons in the *Navy List*. Her figure-head was a bust of Sir William Hoste, the conqueror at Lissa. She had direct-acting engines on the plan of Count de Rosen, of 300 nominal horse-power; and it was remarked of her, when she was launched, that she was the first war steamer built in this country which had the whole of her machinery and boilers below water, and therefore secure from the enemy's shot. It was said of her, too, that her screw was on the plan of Ericsson. She was only calculated to steam 7 knots; and when Captain Key took command of her, her best was a little over 5 knots.

Only a junior captain would usually have been appointed to a command expected to last but a few weeks. Some junior captains would have turned up their noses at it. Key was always ready, and never questioned. He took a command which was destined to last, and to bring him into considerable prominence. He joined the ship at Spithead on 13th July 1853.

All through the year the fears of trouble with Russia were increasing, and towards the summer a large squadron, which was named the "Western Squadron," was formed. To this squadron the *Amphion* was ultimately attached, and it became the nucleus of the fleets which were afterwards despatched to the Black Sea and the Baltic. All through July the ships to form this squadron were gathering at Spithead and St. Helen's, and on the 8th of August Admiral Sir Thomas Cochrane, the commander-in-chief at Portsmouth, hoisting his flag in the new steam three-decker, the *Duke of Wellington*, assembled the whole fleet at St. Helen's.

The heterogeneous character of the navy of this date, and the foreshadowings of the marvellous changes that were to come, are well illustrated in the fleet gradually assembled under Sir Thomas Cochrane's command, or ultimately forming the Western Squadron.

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[1] Died an admiral on the retired list, and K.C.B., 1880.

[2] Died captain and A.D.C., 1865.

[3] Died vice-admiral and C.B., and L.C.A., 1854.

[4] Died an admiral on the retired list, and C.B., 1887.

These were—

NAMES.	TONS.	GUNS.	H.P.	KTS. SPEED.
SCREW LINE-OF-BATTLE SHIPS[1]—				
Duke of Wellington	3771	131	980	10.1
Agamemnon	3074	91	600	11.0
St. Jean d'Acre	3200	101	600	11.2
Ajax	1761	60	450	6.5
Edinburgh	1772	60	450	8.8
Blenheim	1832	60	450	5.8
Hogue	1846	60	450	7.8
SAILING LINE-OF-BATTLE SHIPS—				
Queen	3100	110	...	...
London	...	90	...	...
Prince Regent	...	90	...	...
SCREW FRIGATES—				
Impérieuse	2355	51	360	10.6
Arrogant	1872	47	360	8.6
Amphion	1474	36	300	7.1
Tribune	1570	31	300	10.4
PADDLE FRIGATES—				
Sidon	1328	22	560	10.4
Valorous	1250	16	400	9.0
Magicienne	1255	16	400	10.0
Leopard	1435	18	560	11.2
SCREW CORVETTES AND SLOOPS—				
Highflyer	1153	21	250	9.3
Encounter	953	14	360	10.7
Cruiser	753	17	60	6.5
Desperate	1037	8	400	9.4
PADDLE CORVETTE—				
Vulture	1190	6	470	9.5

Here, assembled in one body, was the old navy, the intermediate navy, and the new navy, which was itself to be obsolete in ten years. But the idea that three navies, and not one, were assembled, can scarcely have presented itself to any officer who was assisting in the display. We shall see good reason for knowing that such thoughts were absent; and perhaps the navy could not be what it is were not the immense majority bent on accepting things as they are, and making the very best of them that could be made. Without doubt—just because the ships were there—it was to the naval officers present the most natural and appropriate thing in the world that a fleet should be composed of sailing ships, screw ships, and paddle ships. The belief that sailing ships were to go, and that paddle ships were almost gone, would have been impossible to inculcate. All minds would have turned away from that form of reflection to consider how the heterogeneous elements could be best combined, and to become assured that they would never pass away, because uses had been invented for them.

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[1] The tonnage as then measured was only rather less than one-half present displacement, and nominal horse-power less than half present indicated horse-power. Thus the *Duke of Wellington*, according to present notation, measured 6071 tons, and 1999 indicated horse-power.

Her Majesty the Queen, who had often viewed the Spithead fleet in passing backwards and forwards between Osborne and Portsmouth, reviewed the combined fleets at sea on the 11th, when there was a sham fight between two divisions; the *Amphion* being attached to the port division under Rear-Admiral Fanshawe, C.B.,[1] who had his flag in the sailing line-of-battle ship *Prince Regent*, with the *Queen*, *London*, and *Vulture*. It was a sign of the times, and of the truth of what has just been said, that the battle should have been fought under sail. It is worth even more note than it might receive, for it explains some transactions in the Baltic during the ensuing year; and illustrates for us how, by the naval mind of that day, the Russian sailing navy was looked upon as a real force when opposed to the Anglo-French steam navy. At the date of writing, it is hopeless to try and throw the mind back to such a conception, but if we would understand aright we must force ourselves to remember that all minds were full of it.

On the 16th the *Amphion* tried her steam speed on the measured mile in Stokes Bay, and made 5.53 knots.

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[1] Afterwards Admiral Sir Arthur Fanshawe, G.C.B.

Remembering that the *Bulldog* used to steam 11 knots when called upon, it is not to be wondered at that in the screw *versus* paddle controversy, which began to rage about this period, Key should, for a time, have upheld the paddle. What he was really upholding was steam power against the larger party which upheld sailing power, and would only admit steam as an auxiliary. But the thoughts of neither side were clear in those days on the revolution that was approaching, and very few of the advocates of the screw were aware that they favoured it because it seemed to give new life to sail propulsion.[1]

On the 18th the Queen went on board the *Duke of Wellington*, and took the screw fleet (except *Amphion*) to sea for a few hours.

On the 22nd the paddle steamers *Leopard*, *Sidon*, *Valorous*, and *Vulture*, with the sailing line-of-battle ships *Prince Regent* and *Queen*, weighed with the *Amphion*, and went on a cruise down Channel under the command of Rear-Admiral Lowry Corry. On the 26th they joined Commodore W. Byam Martin's squadron at Torbay. His broad pendant was flying in the *Duke of Wellington*, and there were, besides the *Agamemnon* screw line-of-battle ship, the screw frigates *Impérieuse* and *Arrogant*, and the *Desperate* screw sloop. The squadron was cruising in the

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[1] On the 15th Key had written to the Controller, Sir Baldwin Walker, as follows:—

"The engine, under ordinary circumstances, makes 45 revolutions, and the screw, which is of 21 feet pitch, has a speed of 9.2 knots an hour, the ship being then driven at the rate of 6.2 knots, which it seldom exceeds; the slip is therefore enormous—above 33 per cent. Where does the fault lie? The engines, though nominally of 300 h.p., exert 550 h.p. They do their work.

"The form of the ship is good, as she sails comparatively well; the fault is not there, and it seems to me that it must lie in the form of the screw. When it is in motion, it is evident to the eye that a large portion of power is consumed in driving the water at right angles to the screw shaft, instead of parallel to it. I would submit for the consideration of yourself and Mr. Lloyd, whether this ship should be tried with a finer pitched screw—say 15 feet.

"At present we cannot keep the steam up to above 6 lbs., though the valve is loaded to 10 lbs., averaging 43 or 45 revolutions, instead of 48 as intended by the manufacturer. I would therefore, with the new screw, keep the revolutions at 48, working expansively, and would then save fuel, diminish the slip, and probably increase the speed of the ship by getting a more fore-and-aft thrust."

Channel, and in and out of Cork and Bantry Bay, until the 15th of October, when it returned to Spithead. The cruise was without event. The bad weather experienced, Key says, on the 5th of September,

"Has done much for our men, who, I find, improve daily, and I do not despair of seeing this ship a creditable man-of-war. They are willing, and cheerful. We arrived at the rendezvous (lat. 50° long. 9°) yesterday, but have seen neither *London* nor the screw squadron. . . . The squadron were spread all day in line abreast at a mile apart to look out. I signalled a stranger N.W. by W. at 4 p.m., and was ordered to chase and ascertain her character; found that she was a merchant ship, which I had suspected from the first, but I wished to exercise the men setting studding-sails, etc., which they do badly."

There is no doubt but that cruising with a squadron may generally be described as pleasant but dull, except during the moments when some exercise or movement is being made. But where there are books in plenty, the captain of a ship can always find employment. Key, coming, as he supposed, only for a few weeks, was ill provided in this way—

"I am getting hard-up for books, having brought such a small supply with me, so I have commenced to read Nelson's correspondence for the third time—no bad occupation for a sea officer. I think Sir H. Nicolas has judged wisely in publishing his whole correspondence. Some letters are superfluous, and many badly written, but it is of importance that one can enter into the study of Nelson's character with a feeling that nothing has been kept back. It gives great confidence in forming an opinion of him. It may truly be said that Nelson's private habits and trivial occupations are worth recording; they teach us to know him—which I fancy I do, thoroughly. He was undoubtedly a vain man, but was too unsophisticated to conceal it. Many a man is more so, and shows it less. . . .

"No signs of *London* yet. I long for news from home, and the sight of a newspaper. I have been out of sorts all day—growling at everybody. How odd it is! Sometimes everything appears to go wrong; everybody seems to oppose your wishes: this has been the case with me to-day. I firmly believe it's all stomach!

"*Sept. 8th*—Yesterday morning the admiral came on board to inspect the ship, exercising us firing shell at a mark, etc. I was much worried with much that was done; there is such an evident want of system here. When I hear that I am to continue in this command, I must alter much. However, the admiral complimented us—which I did not tell the officers, as I feel it was undeserved. I had a dreadful headache all the afternoon, and turned in early. This morning I was all right, and had the satisfaction of beating the flagship, shifting topsail-yards, courses, and jib. . . .

"Although I have been knocking about at sea so much, it still seems to me wonderful that we can fix our position in the ocean with such accuracy. The *Leopard* was sent to Falmouth four days ago—a distance of 240 miles. She was told to meet us in lat. 50° long. 9° at 4 p.m. on Thursday. Within a quarter of an hour of the appointed time we met on the precise spot, as if we had named Hyde Park Corner, or some such well-marked position."

On October 21st, after his return to Spithead, Key wrote—

"Your letter greeted me on my arrival at Spithead on Saturday, when I found myself rather knocked up, having had so much work at night, so I immediately got into a train and went home for a day of rest. I rather surprised them, and enjoyed my Sunday, as you may imagine. You will smile, I daresay, but you can't conceive the soothing effect of finding myself among women, and those my dear mother and sisters, after being two months without speaking to one. . . . One great advantage of travelling is that it teaches people to appreciate home fully; though I have met some of our countrymen (and women) abroad, whose lives have been spent in locomotion, and who do not know what home is, and do not care. They are to be pitied. . . .

"Your remarks on the advantages of a sea life as a preparation for a social one are true in theory, and should perhaps be so practically; but I think it is not so. I hold that it unfits a man for society. He is wrapped up in one pursuit, and leads a life of action and of thought. Studying others, by observation, not by conversation; seldom exposing (?) himself, but unconsciously (?) learning (?) himself thoroughly. What can breed unsocial habits so much as this? Habits cannot be thrown off with the uniform. No, my dear friend, it is bitter to think so, but we must be contented to be 'out of our element' on shore. . . . You say —— is not much liked by his officers in general. I fear you would hear the same character of me just now. I have done nothing but reprimand for the past two months. You also say that the papers mention that we have suffered during the late gales. I hope you do not mean *Amphion* individually,—not a rope-yarn has been damaged; nothing has suffered there but the captain's temper. However, I believe all on board are as happy as channel cruising will allow them to be.

"Two days before our arrival at Spithead we were alarmed by the cry which always makes all hearts beat—'A man overboard!' It was blowing strong at night, the ship going about 7 knots an hour, and a ship close astern of us, as we always sail in 'line.' Fortunately I was on deck. We let go the lifebuoy (which floats, as I daresay you know, with a light burning on it), and lowered a boat, which we soon lost sight of, but knew, of course, that she would steer for the lifebuoy. The anxiety of the moment is not to be described. 'Who is it?' it is asked, and no one can tell, for the absent ones may form part of the boat's crew. I did not know who it was till the boat returned. You can imagine my feelings on receiving an answer from the boat, 'He is saved.' The poor fellow had got hold of the lifebuoy. Do you know the line, 'Hope, that lifeboat on the sea of life'? It is a beautiful simile, but I should prefer, 'that *lifebuoy* on the sea of life,' as more striking. The light not always in view, owing to waves, or dark thoughts, intervening, must have appeared to that poor fellow like hope to one who almost despaired."

Captain Patey's injuries proving such as to prevent his rejoining, Captain Key was appointed permanently to command the *Amphion* on the 8th of November; and on the

27th of the same month he sailed with part of the Western Squadron under the command of Rear-Admiral A. L. Corry.

Naval men's minds at this time, and for years afterwards, were full of the conception of steam as an auxiliary. The idea was to maintain intact the line-of-battle ship, frigate, corvette, and sloop of the old days, only more perfect, and with such steam power as would enable them to make way in calms, and therefore to make full use of the wind when there was any, and yet not to contend against it. Against a strong head wind it was understood that screw ships were properly powerless; for that sort of work the paddle steamer was the only suitable instrument. It was almost a discovery, under these conditions, that a squadron might save its coal and still proceed, by arranging that half the squadron should take the other half in tow. It was then the perfection of the naval ideal of the day when, on arrival off the Tagus on the 8th of December, the *Amphion* took the *Cruiser* in tow, the *Tribune* took the *Duke of Wellington*, and the *Arrogant* took the *Prince Regent*, and all proceeded proudly up the river, the difference between the *Duke of Wellington* as a steam ship, and the *Prince Regent* as a sailing ship, being in the general view a difference in degree and not in kind. The ships already at Lisbon were the *Impérieuse*, *Valorous*, and *Desperate*; and soon the *St. Jean d'Acre* joined them, after which, for some time, attention was wholly bestowed on exercise, both at sea and in harbour.

So, with his mind full of the ideal, Captain Key wrote, following up what he had written in the *Bulldog*, on the 27th of February 1854, a memorandum asking for a revision of the regulations with regard to towing, which directed the ship about to be towed to furnish the hawsers and boats. Key pointed out that the ship about to tow should do the whole duty, as in all the conceivable cases it was more convenient for both ships that this should be so, more especially in what was still the ideal case, towing ships into and out of action. The reasoning is perfectly sound, but it did not carry weight against the sentiment, that as the ship to be towed was the obliged ship, she should share the trouble. I found the old rule in the signal-book when I had to revolutionise it in 1864–66. Key's reasoning not being before me, I passed it on, and I believe it remains in force.

But changes were coming with hasty steps—

> "Rumours of approaching war reach us here," wrote Key on the 1st January 1854; "I am sure I have ever wished to be on such an occasion in command of a fast frigate. It will be a harassing war for us, if it takes place. Blocking the Russian Fleet in the Baltic and Black Sea will be our chief duty, for I suppose they will not dare to come out to meet us. . . . I have a great desire to punish the Emperor of Russia for all his misdeeds, but I fear that he is beyond our reach. We should find it difficult to destroy his fleets if he keeps them in Sevastopol and Cronstadt; but, even were we to do so, it would scarcely harm him. A few years ago he had no fleet, and since it was created it has been of no service to him. He has but little trade to care for; his power does not depend on it in the smallest degree, so the wretch can laugh at us."

The necessity of preparing for war had induced Key to apply for a larger complement of men. The ship was armed on the new model. She had a revolving 10-inch gun on the upper-deck, forward and aft; six 8-inch hollow-shot guns of 65 cwt., and fourteen 32-pounders of 50 cwt., on her main-deck; with twelve 32-pounders of 25 cwt. on her upper-deck. The introduction of the heavy "pivot-guns," as they were called, into fully-rigged screw vessels, arose directly, I think, from the association of ideas, and not from clear reasoning. The paddle-wheel steamer was deprived of the power of mounting her main armament on the broadside. So much space was occupied by the wheels and sponsons that it was necessary to supply force in artillery otherwise than by number. The substitution of the few very heavy guns for the many lighter ones was enforced upon the paddle steamer, and they could not be placed elsewhere than at bow and stern. In the screw ship there was no more reason for introducing these heavy pivot-guns than there had been through all the ages of sailing ships—rather less; because, if she fought under steam, she had powers of bringing broadside guns to bear that were not possessed by her ancestor. But steam and the pivot-gun had become associated in idea, and therefore, though the reason for their use only existed in the paddle ship, they passed into the screw ship, and have remained there ever since. But even as I write, it is custom and not reason which has given them a position which has dominated the whole course of naval construction.

These guns employed very large crews. Seventeen men were necessary to each of the *Amphion's* 10-inch guns, while the half-crews of 7, 6, and 4 men were supposed to be competent to work the 65 cwt., 50 cwt., and 25 cwt. broadside guns. The complement of the *Amphion* was 320 men. Key showed that 25 more were wanted, and, though his brother-officers warned him that the Admiralty would snub him for making such a request, he persevered, and their lordships most politely granted it.

On the 6th of February, Key wrote—

"We have the loveliest weather. It does our ships so much good; warms the men—and mine are getting into capital condition. They will be quite ready for a war. Our three last exercising days I have beaten the flagship and all the squadron. . . . How thankful I ought to be that I got afloat when I did, for those men who are commissioning ships now will have great difficulty in getting men, and can hardly expect to get their ship into order by the time we are wanted in the Baltic. . . . We are in daily expectation of being ordered home."

Prospect of war with Russia now passed into certainty. Key writes on the 14th of February—

"I write half a line to say that we sail this morning for the Downs. I shall perhaps write to you from the Channel before you receive this, but, in case I do not, I leave this to be forwarded by next packet. . . . We are in good trim for the Baltic, where we are to be in the middle of March. The Emperor of Russia has tied the knot tight now, and it must be *cut*. We shall be in the Downs on or before the 1st of March. Do not expect to see me, as probably I shall give no one leave, and cannot therefore take it myself. . . . We shall not hurry on our passage homeward, but work our guns much. We are all pretty well on that point. We are a very happy squadron, and united. Our commodore is to leave us, I fear, for the present. The *Duke of Wellington* is to be the flagship in the Baltic, and he (Commodore Martin[1]) will hoist his broad pendant in the *Nile*.

"The assemblage of the fleet was at Spithead, and not in the Downs, as was supposed. At Spithead the *Amphion* arrived on the 1st of March, and there were already the *Princess Royal*, screw line-of-battle ship, bearing the flag (blue at the fore) of Vice-Admiral Sir Charles Napier; the *Edinburgh*, with the flag of Rear-Admiral Chads; the *Hogue* (steam), *Boscawen* (sail), *Leopard*, *Magicienne*, *Dragon*, and *Odin*, paddle-wheel steamers."

There is a note in the *Amphion's* log, on the 4th of March, which shows us, as in a mirror, how much more closely allied the times I write of were to forty years before, than to the times I write in, forty years later—

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[1] Afterwards Admiral Sir William Fanshawe Martin, G.C.B.

> "Pay-clerks came on board and paid ship's company up to the 31st December 1853."

Merchant seamen to this day engage for the voyage, and are paid up when the voyage is over. In 1853 that was the normal idea of service in the navy. Payment to the end of a year was a distinct innovation, and a march with the times. The delay of Government to settle in March, pay due in January, was not the way to put it. It was a concession to pay up at all until the voyage was over, and the men were to all intents and purposes discharged from the service. The connection may be taken with the following, which Key wrote on the 8th—

> "All is going well with us. I have entered a few men here, but am still nearly 30 short. However, when I look round and see others so much worse off, I feel very contented, and my men are so happy—ready for anything."

The impotence for offensive purposes of the enormous fleet that the French and English assembled in the Baltic gave rise in both countries to much public indignation and reproach. The two countries had forgotten all about the nature of naval war, and expected impossibilities. The navy was never itself led away in this direction. It knew that, unless the Russian Fleet put to sea and offered battle, its action in the Baltic must be confined almost wholly to the operations of blockade. But it had hallucinations of its own with regard to the Russian action. Key writes on the 10th March—

> "The Russians are stronger than we imagined, having 35 sail-of-the-line.[1] I am told Sir B. Walker[2] says that they will most certainly come out to fight us, which will be the best thing for the squadron. Of course, so long as they remain behind Cronstadt, we can do nothing."

Here the view was clear enough as to the impotence of our fleet to deal with anything but the enemy's ships; but, on the other hand, the idea of the Russian Fleet showing itself at sea and offering battle was really preposterous.

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[1] That is, sailing ships.

[2] Admiral Sir Baldwin Wake Walker, Bart., Controller of the Navy. Died K.C.B. in 1876.

They had not a single steam line-of-battle ship, while we were sending up eight as a first instalment. They had few steamers of any kind, and scarcely any of power. They knew very well that a steam line-of-battle ship, fighting a sailing line-of-battle ship, had only to take up and maintain a particular relative position, to enable her to keep her broadside bearing on the bow or the stern of the sailing ship, and then to destroy her, with perfect immunity to herself. But the English navy had not realised the power of steam. It was to the last full of the idea of fighting under sail as in old days, and it required the stimulus of war to enlighten it.

On the 9th Her Majesty passed through the fleet, and was greeted with tremendous enthusiasm. On the 11th the *Neptune* sailing line-of-battle ship arrived, bearing the flag of Rear-Admiral Corry, and Rear-Admiral Plumridge hoisted his flag in the *Leopard*. In the afternoon the *Fairy*, with the Queen on board, came from Osborne to the fleet. All the flag-officers and captains went on board and took leave of Her Majesty. At twenty minutes to two the fleet weighed and proceeded under sail to sea, led out by Her Majesty, and at half-past two the ships passed her in succession, cheering as they passed. Next day the fleet anchored in the Downs, and on the 13th it again proceeded, and, moving in three columns, sometimes sailing and sometimes steaming, crossed the North Sea and arrived at Vinga Sound, an open anchorage on the coast of Sweden, nearly opposite the Skaw, on the 18th of March.

Of the passage out, as it was that of the largest purely steam fleet ever got together, a word or two may be usefully recorded. Practically it was an auxiliary steam passage. An attempt was made during the first day to proceed with sail alone, but, the wind falling light, the fleet got under steam at eight on the morning of the 12th, after which, to the Downs, the highest speed reached was 6.6 knots. On leaving the Downs, sail was again resorted to alone, but, the speed falling to one knot only, steam was employed to assist, and was so used up to the time of arrival in Vinga Sound. The *Amphion* notes herself occasionally as "using steam to keep station," and that no doubt was the case in other ships. The winds were generally light from the south-east, so that sail could be employed throughout. The little voyage of some 650 miles, accomplished in five days, was not without its adventures, nor without disclosing the risks to which a fleet depending in great degree on its sails was liable—

> "On Wednesday and Thursday (the 15th and 16th) we had the thickest fog I ever saw. On Thursday morning, of our fine squadron, only five were present. The two admirals, Napier and Chads, *St. Jean d'Acre*, *Hogue*, and *Amphion*. One admiral and eleven ships missing. Certainly it was not easy work to keep company, but I hope the admiral will keep us in better order than this."

The fleet only once appears to have reached the speed of 7 knots, and it was generally 5 knots or less.

This advanced guard of the Baltic fleet consisted entirely of steam ships, and the number of screw ships shows the immense progress steam propulsion had made since Key had quitted his paddle ship.

The fleet anchored at Vinga Sound embraced the *Duke of Wellington* (flag of Vice-Admiral Sir C. Napier), *St. Jean d'Acre*, *Princess Royal*, *Royal George*, *Cressy*, *Edinburgh*, *Hogue*, *Ajax*, *Blenheim*,—9 screw line-of-battle ships; *Impérieuse*, *Euryalus*, *Arrogant*, *Tribune*, and *Amphion*,—5 screw frigates; *Leopard*, *Valorous*, and *Dragon*,—3 paddle-wheel steam ships. Making 17 sail in all.

Colliers had been sent on before the fleet, and the ships while at Vinga Sound were employed in coaling and firing at targets, as to which Key did not like so much expenditure of ammunition. The commander-in-chief had gone to Copenhagen in the *Valorous*. On 23rd March, Key writes—

> "Admiral Chads came on board and inspected us, made us fire shot, etc. After he had worked us up a bit, Commodore Seymour[1] came on board and went round the ship. What a contrast these two men offer! Both good in their way—I should rather say, both excellent. The first all fire and energy, combined with a thorough knowledge of his profession, and devoted to it exclusively. The other of a cautious, penetrating mind, highly cultivated and deep thinking; but, I should imagine, too cautious to take responsibility on himself when it is perhaps needed."

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[1] Then captain of the fleet, afterwards Admiral Sir Michael Seymour, G.C.B. Died 1870.

On the 22nd Sir C. Napier returned from Copenhagen; on the 23rd at daylight the whole fleet weighed under steam, and at 1.20 the next morning it anchored off Forness Point, at the entrance to the Belts. Admiral Plumridge, with some of the smaller vessels, was now sent ahead to mark the dangers of the Belt, and thus aided, the fleet, having picked up the *Neptune* and *Monarch* sailing line-of-battle ships, with the *Bulldog* and *Vulture* paddle steamers, on the 23rd, got as far as Reef Ness, at the entrance to the Great Belt, by the evening of the 24th.

The navigation this day had been somewhat intricate and difficult, although the marks were admirable; but with steam, and the precaution of marking the shoals by ships, the risks were reduced to a minimum, and there was no mishap; but it blew a heavy gale from the north-west on the 25th, and it became necessary to strike topmasts. On the 26th the fleet passed the narrowest part of the Belt—between Knud's Head and the Sprogö patches—and anchored in the afternoon off Vengeance Shoal. Weighing again at seven the next morning, signal was made to rendezvous at Kiel, the commander-in-chief parted company, and the fleet anchored in Kiel Bay after dark. The progress was no doubt leisurely, but notice of the declaration of war had not yet reached them.

Key writes on 27th—

"We are just anchoring in Kiel Bay (Denmark), having safely passed the Great Belt with beautiful weather. Oh! how my pride is fallen! On Thursday evening (the 23rd) I turned in, satisfied with myself and all the world. Admiral Chads having been on board and inspected us with our guns, firing shot at a mark, etc. He told me, and he told Sir C. Napier, that 'he had not seen anything so good for a long time; and he wished his own ship only approached us.' So I was very happy, and very proud. On Friday it had been blowing very hard during the night, and I had to let go a second anchor. So, when the signal was made to weigh, I was somewhat behindhand, and the admiral made the signal, 'Very slack!' Think of that! The other ships were without a second anchor. I *know* we were not slack, and shall explain it to Sir C. N. when I see him, but meanwhile the signal weighs on me. But it has done me good. I feel it has. I *know* that we are the smartest ship in the fleet, and I will make him own it.

"*Tuesday, March 28th.*—I must send this off at once, as a signal is made to do so. It is a melancholy letter, but I am all right now. We have manned and armed all the boats of the fleet, and the admiral has signalled, '*Amphion* first!'"

The whole fleet moved out of Kiel Bay on the 29th of March, did some little manœuvring under sail, and anchored again in the evening. Early on the morning of the 31st the fleet again weighed, and made sail for Kioge Bay. At midnight Key wrote—

"We have heard through Kiel and Hamburg that war is declared with Russia,[1] and I imagine that the admiral heard it officially this afternoon, for he bestirred himself on reading his despatches, and made the signal to get steam up without loss of time.

"*April 1st.*—Evening, Copenhagen. After I had finished writing to you last night, a thick fog came on which compelled the fleet to anchor;[2] not, however, without two of them running on board of each other, breaking numerous spars, destroying two boats, and killing two men. The fog was wonderfully thick. This morning at eight we weighed and stood towards Kioge Bay. By the bye, after weighing, the admiral hoisted the signal, '*Amphion* very smart'—not smart in the female sense, but man-of-war like. Well! just before the fleet anchored, he signalled for *Tribune*, *Dauntless*, and *Amphion* to proceed to Copenhagen to water and coal, about which we are now employed, and shall be, I fear, all to-morrow—Sunday. I believe it is in contemplation to send a small squadron to the Gulf of Finland at once. This will be delicious; as it is in detached service only that frigates can find decent work to do. But I fear that our want of speed may prevent this ship from being sent.

April 2nd.—Ryder[3] passed the evening with me yesterday. He has done a great deal in his ship in a short time. I am happy to say that *Cruiser*[4] is to join our fleet. . . . We are all anxiety for the official declaration of war, which has not yet arrived."

Rejoining the fleet at Kioge Bay on the afternoon of the 3rd of April, war being declared, Captain Key received orders on the 5th to cruise, until further orders, off the north-west end of the island of Bornholm, that is, in a channel 20 miles wide, about 90 miles farther up the Baltic than the fleet lay, between the island and the south-east part of Sweden, being in the track of vessels trading between the Sound and Baltic ports. His duty was to examine all vessels bound to any Russian port, and to detain such as were found with contraband of war on board. He was to see that no Russian war vessels passed, but was furnished with the Queen's Order in Council, which allowed Russian vessels a limited time of freedom from capture, provided they had no contraband of war on board.

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[1] It was declared on 27th March.

[2] We may note here one of the disabilities of a sailing fleet. A steam fleet would now proceed, unless there were dangers in the way, and order would be preserved by means of signals made with the steam syrens.

[3] Afterwards Admiral of the Fleet Sir A. P. Ryder, K.C.B. Drowned in the Thames in 1888.

[4] The *Cruiser*, a 17-gun screw corvette, commanded by Commander Hon. G. Douglas.

The *Amphion* had a busy, if profitless, time on her new station till the 13th, in constant chase and boarding of merchant ships of various nations, none of which were detained. On the 13th the fleet came up in three columns, consisting of 11 sail-of-the-line and 11 frigates. *Amphion* took her station as fifth ship in the rear squadron.[1] She thus proceeded forwards with the fleet, every now and then being detached to chase various sail without result, though on the 17th the *Gorgon*—Key's old ship—took possession of a Russian brig. On the 21st the fleet was up towards the entrance to the Gulf of Finland, and Key was detached to cruise between the north part of the island of Gothland and Dagerort, at the southern part of the entrance to the Gulf of Finland, and the *Cruiser* and *Conflict* were placed under his orders. He writes on the 30th—

> "I think I told you that the admiral had detached me to cruise between Gothland and Dagerort. Well! I heard there was a frigate in the Gulf of Riga, off Riga, and that the ice, which still filled the whole of the bay, would prevent merchant vessels from getting up to the town; so, although I am afraid it is a long way off my station, as I knew that the admiral would not send any ship up there on account of the difficulties of the navigation, and the ease with which the Russians could send a force down to intercept any ships in the gulf, I wrote to tell the admiral that I intended to go in, and trusted for his approval. On Thursday evening (the 27th of April) I met the *Cruiser* and took her with me, since which we have been night and day in the ice. I got off the town; no man-of-war was there; the forts fired on us—a few shot, but a long way off. I took two merchant vessels (of which *Cruiser* will share), had a shot at a gunboat—very nearly fixed in the ice immovably, but got clear and came out with my prizes in tow, and *Cruiser*, last night and this morning, through the most intricate part of the navigation in a regular London fog. What the admiral will say I have yet to hear, and will not fail to tell you. It puts some money in his pocket,—that's one reason for pacifying him, and I know I have done a very proper thing. Douglas[2] is going to Memel this evening, and will take this. He is a good hand to have as second. I really am so knocked up that I cannot write more. I have not heard from home for an age, and the last paper I have seen is April 1st, but I hope to

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[1] The squadrons of a fleet were still called, as in the old time, "van," "centre," and "rear," although when sailing in three columns they were abreast of each other, and in line, the rear might be the van.

[2] The commander of the *Cruiser*.

get our letters at Faro, where I am now going. By the bye, we had a narrow escape of being wrecked there ten days ago in a gale of wind. But don't imagine the old *Amphion* is going to leave her bones in the Baltic."

But there is many a slip between cup and lip, and "old *Amphion*" took the ground on the way to Faro Sound no later than two days after thus writing. Happily, she did not strike hard, and by shifting guns and backing sails she got off into deep water, and anchored at Faro Sound a couple of hours after. Going out again in tow of the *Rosamond* on the 5th of May, she again took the ground, and remained ashore from a quarter to eight that morning until three o'clock on the morning of the 6th. The fleet, under Sir C. Napier, was then cruising north of Gothland, and early on the morning of the 7th the *Amphion* joined them and took her place in the "order of sailing." The *Conflict*, one of the ships under Captain Key's command, had had the misfortune to lose her captain—Foote—who was drowned in the surf on the bar at Memel early in the cruise. Captain Arthur Cumming,[1] already distinguished for his enterprise and gallantry, had been sent out to assume the command of the *Conflict*, and now, much to Captain Key's contentment, joined the *Amphion* bag and baggage for conveyance to his ship on the 8th of May.[2] Key met the *Conflict* off Libau on the 10th, and Cumming assumed command of her. *Amphion* went on to Memel, and thence on the 13th Key wrote—

"I told M—— to answer my letter to her to Memel, but you had better not do so now, as the weather is clearing up, and I imagine that the admiral must attack Revel or Sveaborg shortly, when he has promised to send for us. I think I told

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[1] Afterwards Admiral Sir A. Cumming, K.C.B. Died 1893.

[2] Captain Key's new orders ran as follows:—

"*Duke of Wellington*, off GATSKA SANDO,
"*7th May* 1854.

"*Memo.*—You will take under your orders H.M. ships *Conflict*, *Cruiser*, and *Archer*, and blockade the Russian coast between Filsand light and Memel. Any prizes you may take you will send into Memel, and endeavour to get crews to take them to Sheerness.

"Whilst you are employed on this service, you can look into the Gulf of Riga, but you are not to run any risk in so doing. . . .

"CHAS. NAPIER,
"Vice-Admiral and Commander-in-Chief."

M——that I have to blockade the whole Russian coast with five ships. This gives me ample occupation, especially as my instructions are vague, and there are so many conflicting interests among the neutral nations that I have hard work to steer clear of misunderstandings. But I enjoy the work thoroughly, especially as my spare moments are occupied in planning an expedition of my own which I have not yet divulged to a soul. If it takes place you will hear of it in time. I am anxious to 'get our hands in.' None of us as yet realise the war. A few nights ago I was running down this coast looking for *Cruiser*; we saw her about 10 p.m., a thick, hazy night. I made the private signal and hove-to. She hoisted something, not the proper signal, and hove-to also, about three-quarters of a mile to windward. I intended to wait till daylight, and thought, of course, that she understood that. At daylight she bore down towards us under steam and sail (I had turned in for two hours), and Douglas[1] hailed to say that he had been at quarters all night, guns double-shotted and primed, the men with trigger lines in their hands waiting for the order to fire, he taking us for a Russian frigate. Had I been hasty and ordered a gun to be fired to enforce private signal, it is most probable that the *Cruiser* would have fired into us without orders. He came to breakfast with me, and we had a hearty laugh over it. He said that he never spent such a night in his life. . . . Is it not cruel the way they increase the premium for insurance on a life in the Baltic? . . . If they knew how safe we consider ourselves under our chief (*entre nous*) they would not charge so high. . . . I wish I could tell you something of our prospects in this part of the world, but I cannot. The admiral has not determined on anything—certainly will not do anything till the French arrive. Of one thing I feel pretty confident: whatever we attempt will be successful; but caution seems the order of the day."

The next letter describes the result of the "expedition of his own." It is dated Memel, 18th May—

"I am very sleepy, but I must let off some of my wrath against the *Times* before I go to bed. I have just read that we, the *Amphion*, are Russian prisoners, probably *en route* for Siberia, or enjoying the knout. Well! I hope by this time they will have had to register what we have been about. Meanwhile I will tell you. There is a town and harbour on this coast called Libau. It contains 10,000 inhabitants, and has a considerable trade, second to Riga in this part of the world. It is well defended by nature, but not fortified, having two or three guns mounted, and 400 or 500 soldiers quartered there. . . . I knew that there were several Russian merchant vessels there, and I was determined to have them out. The day after I left Memel, where I wrote to you last, I boarded a Swedish brig, and she told us that it had been very strongly fortified and thousands of troops sent there. This was startling; nevertheless I had made my mind up, and stood in for Libau, where I found *Conflict* about four miles off shore. I had ordered Cumming to meet me there that evening. We discussed a plan of attack, and I showed him my letter, which I intended to send to the governor by him (Cumming) under a flag of truce. He proposed one or two slight judicious alterations, which I made, and next morning (the 17th) we stood in for the town, sounding carefully by boats, as the approach is dangerous. We succeeded in getting within good gunshot of the town, which I had scarcely hoped for. Then I sent in the letter, which gave them three hours to send out the merchant vessels, or the consequences would be serious. You may imagine my anxiety during the three hours. He refused, but said he would send a final answer before the time specified had expired. Meanwhile troops were on the move, marching and galloping about, and we were preparing our boats, arming the crews and making all ready for a serious encounter. At the appointed time the governor sent off to say that the troops had left him, and that, though it was out of his power to send the vessels out, we might send our boats to fetch them.[1] I thereupon took our boats in armed, and told them that the first shot fired at us would be the signal for us to open fire, otherwise I should not do so. We pulled up the creek, which is only 50 or 60 yards broad! for 1½ mile before arriving at the bridge, both banks being crowded with people the whole way. I found all the vessels above the bridge, and so, as I was prepared with 'blasting apparatus,' I told the people that unless they removed the bridge, or part of it, I should blow it to pieces. I took possession of a steamer for the day only, as she was a Dane, but I got the steam up and kept her ready as a refuge for the boats in case of a sudden attack. And there we were, with 110 men in possession of an enemy's town with 10,000 inhabitants and 400 or 500 soldiers, taking their property from them in the quietest way, nearly three miles from our ships! We took possession of eight new vessels, some of which were aground. I would not allow anything to be destroyed. What we could not take we left, and the private property of the captains of the vessels was given up to them. They made a passage through the bridge for us, and we brought them all down, took them in tow of the ship, and brought them to Memel. I am anxious to let the admiral know, and shall send *Archer* to acquaint him.

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[1] Commander Hon. Geo. H. Douglas, now (1898) admiral.

"The French squadron has not yet arrived, and until that takes place nothing serious will be done. I have been fortunate in having the opportunity of keeping our men employed, and in this case specially fortunate in having a ma like Cumming to second me."

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[1] The "governor's" reply was in German, translated as follows:—

"LIBAU TOWN HALL,
"*May* 5/17, 1854.

"SIR,—The notification addressed by Her Britannic Majesty's commander of the *Amphion* to deliver up the Russian merchant vessels in the port of Libau has been received by the magistrates of this town, there being no military or civil governor here.

"The town of Libau being in a defenceless state, has no power to resist the demand.

"The peaceable inhabitants are compelled to submit themselves to any demands put to them. They expect, however, that Her Britannic Majesty's power will only undertake that which is consistent with humanity and honour.

"The ships demanded can and will not be refused, but it is entirely impossible to deliver them in the time prescribed, as the most of them are unrigged and lying on a swampy ground.

"Under these circumstances the magistrates can only reply that Her Majesty's Parlementaire should convince himself of the impossibility, and resolve in which way the said merchant vessels are to be brought out of the harbour. Trusting that meanwhile no hostilities will be undertaken against the town,—I have the honour to be, sir, your obedient servant,

"In the name of the magistrates of Libau, the presiding burgomaster,
"FRIED. ZÜNTHER."

Off Öesil, Captain Key wrote, on 22nd May—

"I am sending *Cruiser* up to the admiral on her way to Faro, and to tell him about Libau. . . . I am not anxious about the result, as, whether he approves of the act or not, he cannot but say that it was well executed. Nothing was omitted, nothing went otherwise than I could have wished. But I am anxious to hear from the admiral,—in the first place to get our letters, and because I have been doing many things concerning the blockade on which I wish to have his opinion."

The next letter is dated 6th June, from Memel—

"The admiral approves most highly of the prompt and judicious measures, etc. etc., at Libau, and also of all that has been done since he entrusted me with this command.[1] Douglas tells me that they have been making partial attempts on some forts at Hango, but that there appears no prospect of any serious work, and Commodore Seymour confirms this. So I am to remain on this station for the present. . . . My dear ——, Charlie Napier won't do. He has nothing in him on a large scale, and his nerve is gone. This is between ourselves. If this war continues we must change our commander-in-chief, or our prestige is gone! . . . We have had such wretched weather here. No communication with the shore for three days, and thermometer at 42° at noon. My roses suffer."

The *Amphion* had somewhat of a monotonous time just now. She cruised, nearly always under sail, up and down the 160 miles of coast she was guarding, and with little more exciting in hand than chasing neutral traders and warning them of the state of blockade—the warnings being generally obeyed. The pleasantest part of it, perhaps, was the meeting with the ships under Key's command and the comparing of notes with the commanders.

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[1] The Commander-in-Chief's official approval ran:—

"*Duke of Wellington*, HANGO BAY,
"*28th May* 1854.

"SIR,—I have received your letter of the 18th inst. with enclosures, giving an account of the surrender of the town of Libau and the delivery of the shipping in that port; and I much approve of the prompt and judicious steps you took to accomplish this object, and the humanity you showed in not injuring the town.

"(Signed) CHAS. NAPIER."

The Admiralty approval, dated 15th June, was, according to Admiralty manner, colder. They commanded Mr. Secretary R. Osborn "to express their approval of the conduct of Captains Key and Cumming, together with that of the officers, seamen, and marines employed on this service."

There were, however, occasional captures of intending blockade breakers. Key writes on the 16th June—

"We have still cold weather, with endless fog, though close to midsummer's day. . . . Ryder is gone home to have something done to his machinery, I believe. He is to take the prizes captured for attempting to violate the blockade. The French squadron has arrived; but I see no prospect, nor hear of any probability, of our doing anything in these waters this year. No; nothing.

"I am almost ashamed of the way in which Sir Ch. Napier and Sir J. Graham write to me, calling our affair at Libau a gallant exploit, a dashing enterprise, etc., when there is so much to be done. But next year there must be a change in the state of affairs. We want troops, no doubt, to do anything of importance."

Sad news came in the middle of June, of which Key writes from Memel on the 19th—

"Our first summer's day! So hot! It has done me up; but we leave here to-morrow, so I must write a line before turning in. The papers will probably have told you before this of the sad affair in the Gulf of Bothnia. The *Vulture* and *Odin* attempted to imitate our Libau incursion; but they neglected one important precaution—viz., anchoring their ships within gunshot of the shore. They sent their boats in to demand that some vessels should be given up, their boat carrying a flag of truce, but the men all armed! The governor refused, and the boats then turned to return to their ships. The enemy immediately opened fire on them from two field-pieces; killed a lieutenant, a mate, a mid, and, I think, 4 men; wounded a lieutenant of marines, a mate, and 8 men—all of *Odin*. The *Vulture's* boat was taken possession of, with her gun, 20 seamen, 8 marines, and a mate. Poor Frank Scott of *Odin* will be much distressed. Captain Glasse of *Vulture* was in command.

"I am going to the admiral without orders, but I cannot rest here in peace until I am satisfied in my own mind that he intends to do nothing in the Gulf of Finland. I want him to take Revel. They say it's of no use. Granted it's of no use to us, but it is to Russia; but more than that, nine-tenths of our men have never seen a shot fired in anger, and how unwise it would be that Cronstadt or Sveaborg should witness their début. Our men want training in this matter, without which we could not expect them to do much. And more, our officers will not have confidence sufficient in them to attempt much. It seems sanguinary to wish to take Revel merely as an experiment, but war is not child's play, and nothing will be done worthy of our country without serious and careful preparation. I have no doubt that the press will soon begin to complain of our tardiness in not destroying the forts and fleets. Before they do so, let them remember that our fleet in these waters is the only shield between you and destruction, the invasion and almost certain overthrow of your hearths and altars. If our fleet is disabled by an attack on these masses of granite, the Russian fleet is free to transport, not 50,000 men, but 300,000 troops to England, when there will be neither ships nor soldiers to oppose them. If people complain thereupon, remind them of this, and ask if they would wish any attempt to be made when a doubt existed of our success."

On the 24th of June the *Amphion* arrived in Baro

Sound, in the Gulf of Finland, where were some French ships and Rear-Admiral Corry's squadron of seven sail-of-the-line and four steamers. Key had brought them up a cargo of thirty bullocks. But he was back again on his old ground by the 28th. And now Captain Key carried out a piece of seamanship which reminds us of the work of the old war in such matters.

The carpenter of the ship discovered that the mizzen-mast head was badly sprung in two places, and a further examination showed that the mast was rotten throughout. Key bought a spar at Memel on the 4th of July, and, lying in the open roadstead, got the old mast out, made a new one, and stepped it on the 8th. He was at sea again with sail set on his new mast on the 10th.[1] He wrote on the 5th—

"Oh, the heat! Jersey is nothing to this. Having been 'friz' for the last six months, you can imagine how we thaw! I have serious thoughts of having a mould made to contain myself. My present occupation is making a new mizzen-mast, which I hope will be finished to-morrow. I think the admiral will be pleased at our getting this done without reporting it to him. In that case he would have sent us to England, as I am sure he would not take on himself the responsibility of shifting a mizzenmast at sea.

"Yesterday we found poor John Foote's body, which we buried on shore with military honours, landing all our marines and many bluejackets. It was a fine sight for the Memel people. We have this morning heard unpleasant news from St. Petersburg, that two, if not more, of our steamers have been destroyed by the batteries at Cronstadt, having got on shore within range of the forts. This requires confirmation, but there is probably some foundation for it.[2]

"*July* 11*th*.—I have received my orders, very complimentary, to return to Sir C. Napier for a short time, and I leave for him to-night.

"Baro Sound, *July* 17*th*.—I have but a moment to write to tell you that we have joined the Commander-in-Chief, and, I imagine, at a most opportune moment. There is 'something in the wind.' Nothing very formidable, but something more than has yet been attempted. It is time! . . . I had a long yarn with

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[1] Sir Charles Napier wrote, in reference to this achievement, from Ledsund, Aland Islands, on 1st August:—

"With reference to your letter of the 24th ult., reporting that, on finding the *Amphion's* mizzenmast rotten, you had unstepped it at sea for examination and repair if it were possible.

"I approve of your purchasing a spar at Memel to make a new mast, the old proving perfectly rotten; and I have considered it my duty to make a special report to the Admiralty of your smartness on this occasion."

[2] It was an unfounded rumour.

Sulivan[1] yesterday. He is, as I knew he would be, the life and soul of the squadron, and he has been surveying every hole and corner of this Gulf of Finland. . . . We shall not do anything till the French troops arrive."

It was the attack on Bomarsund which was in contemplation; and some weeks before, Captain Sulivan had carried out a sufficiently close survey of the position to arrange the plan of attack. Bomarsund was the fortified place of the Aland Islands. The fortifications consisted of one principal and three smaller stone forts, all accessible to fire from the sea, and all capable of being commanded by properly placed batteries on the land. In preparing for the attack, Sir Charles Napier divided his fleet into three parts. First, Commodore Martin, with nine sail-of-the-line, mostly steam ships, watched the Russian sailing fleet at Cronstadt. Secondly, four steam sail-of-the-line with steam frigates, including the *Amphion* and smaller vessels, together with four French steam vessels, were detached to conduct the sea part of the attack under Admiral Chads, while the mass of the fleet was assembled at Ledsund, in the Aland Islands, in order to support Commodore Martin should the Russian Fleet embark in the foolhardy enterprise of breaking out. The real attack was to be conducted by 10,000 troops, in course of arrival from France. The fleet began to move from Baro Sound to Ledsund on the 18th, and *Amphion* anchored there on the 21st. The next morning Admiral Chads's squadron, consisting of the steam line-of-battle ships, *Edinburgh*, *Hogue*, *Blenheim*, and *Ajax*, with the *Amphion*, proceeded to their appointed positions, and just before three o'clock anchored within gunshot of the Bomarsund forts. The Russians promptly availed themselves of the opportunity to open fire, on which the ships moved a little farther out, sending round boats to survey the approaches in every direction, and to guard against surprises by gunboats, etc.

Key found time to write on the 24th—

"I have not heard from England for some time, and in this outlandish place

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[1] Then captain of H.M.S. *Lightning*, as surveyor-in-chief to the fleet. Died as Admiral Sir Bartholomew Sulivan, K.C.B., in 1890. He had been, as commander of the *Philomel*, Key's warm friend and ally in the river Plate.

I fear I must wait some time longer. We left Baro Sound with the fleet on Tuesday 18th, and on Friday evening anchored in Ledsund, in the Aland Islands. At daylight on Saturday, *Edinburgh*, *Ajax*, *Hogue*, *Blenheim*, and *Amphion* were ordered to proceed to Bomarsund under Admiral Chads. The passage up through the islands was very interesting and pretty. Our old friend Sulivan piloted us, sometimes almost rubbing our sides against the bushes. We anchored about 2000 yards from the forts—most formidable-looking affairs. We had scarcely brought up when they opened fire on us from a few guns. Their shot fell inside, but as one shell passed beyond us we all weighed and shifted about 200 yards farther out. I will send you a sketch of the forts and island before long. I do not think that we have sufficient men to take them, but I know that we shan't try, as Sir C. Napier has ordered Admiral Chads not to attack. I imagine that we shall take them when the French troops arrive, not before, though we could do it by assault and escalade with one or two more ships, but not without considerable loss. Ships have never been face to face with such forts as these before. You will have seen an account in the paper about Captain Hall[1] having 'successfully bombarded Bomarsund.' There is scarcely a scratch visible; he killed two men, and fired away all his 10-inch shot, which is very scarce. G—— dined with me yesterday, and our chaplain, Mr. Jolley,[2] whom I like better every day. He is now in my cabin taking a 'Hannah-Petterson-erish' looking sketch of the forts. He has taught our boys to sing very creditably in church. . . .

"The troops will not be here, I fear, for ten days, which will make our operations very late, as the season is advancing. I hope that we shall not winter here, whether we take Bomarsund or not. I alarmed a French captain by telling him that it was probable. . . . We all dine with Admiral Chads to-night, our chief; and a very fine fellow he is, were he a trifle younger. He is sixty-eight, though amazingly active. . . . I am happy to say we have escaped the cholera as yet. It has been to a considerable extent on board most of the ships."

For some days the *Amphion* was in and about the Aland Islands, with French and other ships on the move, admirals and generals reconnoitring, and more preparation going on than was quite agreeable to Captain Key's active and enterprising temper. On the 2nd of August, off Bomarsund, he wrote—

"I must not let my feelings get the better of me, and give vent to them during our present *humiliation*, looking at these forts, and compelled to send to *France* for *soldiers* to take them. I am not prepared to say that we have not done the wisest thing in waiting for troops, but undoubtedly we might take them ourselves by landing marines and seamen. We should, however, have suffered much loss, for they are very formidable on the sea face. The troops have arrived, but have not yet disembarked. There will not be many ships engaged, but I will not waste ink and time by writing of what we are going to do. I hope soon to tell you of what we have done. I have hopes of *Curaçoa* yet. She is not commissioned, and Sir Charles tells me that I am to have a better ship. Two days ago I was with the admirals and generals in *Lightning* (Sulivan); we went in to reconnoitre the forts; they fired several shot and shell at us. One passed over the poor little *Lightning*, and would certainly have sunk her with her valuable cargo, Baraguay d'Hilliers, Napier, etc.—Key,—what a loss to the country! I am now anchored near Yelverton,[1] and see a great deal of him. We have taken possession of two islands, on which we forage, and indeed we are living on the fat of the land."

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[1] Captain W. H. Hall of the *Hecla*.

[2] Rev. W. R. Jolley, M.A., F.R.G.S., Incumbent of St. John's, Birkenhead, and Chaplain in Ordinary to the Queen, who had only recently joined the navy, the *Amphion* being his first ship.

No description of the attack on Bomarsund from Captain Key's pen has been preserved. The *Amphion's* particular share in the enterprise was first on the 8th of August, anchoring in company with the French *Phlégéton* within 2000 yards of a battery which would, if unsilenced, have interfered with the landing of the French troops. The Russian garrison evacuated the fort as soon as *Amphion* opened fire, whereupon Key sent his boats in and spiked the guns. In the afternoon of the same day the *Bulldog* ran aground, and it was the task of *Amphion* and *Vulture* to pull her off again, which they did in the evening. On the 10th Key saw the *Penelope* take the ground within range of the largest fort, which at once opened fire on her. He sent a boat to her assistance, while other ships were sent to her, and the *Valorous* closed with the fort to divert its fire. She was got off, but not till she had thrown her guns overboard, and she rejoined the squadron between 2 and 3. On the 11th and 12th Key's task was to assist in landing the French field-pieces and stores, while on the 13th the *Amphions* were spectators of the combat between the batteries which had been erected by the French and English on shore, and the Russian forts, without taking any part in it. On the 14th Key had an opportunity of trying the range of his guns on the main fort, which was in continuous action with the shore batteries, the fort returning his fire. Something of the coolness with which war is conducted is illustrated by the fact that on the 15th, while the *Amphion* was firing at intervals of five minutes on the main fort of the Russians, she was "dressed" with masthead flags in honour of the birthday of the Emperor of the French, in uniformity with the rest of the fleet, while she paused at noon in her gun practice to fire a royal salute.

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[1] Captain, afterwards Admiral, Sir Hastings Yelverton, then commanding the steam frigate *Arrogant*, 46.

On the 16th she was permitted to get a little closer to her work, and at 11 a.m. opened in earnest on the fort with shot and shell; but in less than an hour and a half Key saw a flag of truce hoisted on the fort, ceased firing, and reported the fact by signal to the admiral. At a quarter to two in the afternoon he saw the English and French flags flying on the fort, and knew that the operations were over, and that Bomarsund had fallen. In writing on 20th to 23rd, Key says as little about what had taken place, or about his own share in it, as though it had been a matter of no concern—

> "It is rumoured that Hangö will be the next object of our attention, in which I am happy to say the troops can take no part. The capture of Aland and the destruction of Bomarsund will not please the Emperor Nicholas. It is undoubtedly the fourth strongest fortress in the world, and, though decently defended, has been taken with the loss of not more than fifty men. I have attempted a sketch of it, which you will see when we meet in October. I have no doubt that the *Illustrated News* will abound with views of it, which will give you a much better idea of the place than I can. It was interesting to observe how anxious the prisoners were to go in the English boats rather than the French, showing thereby a degree of acuteness I did not give them credit for. Inside the forts we found an enormous supply of everything—provisions, clothing, ammunition, medicines, etc.; all of which will be brought home, I suppose. . . . I have received an approving letter from the Admiralty for shifting the mizzenmast with our own resources.[1] 'Every little helps,'—I mean, these sort of things increase my influence at headquarters towards assisting those who know *me* well, and this is one of the stepping-stones to power. . . . Yelverton has been my sketching companion. He is not an artist, but his rough sketches are very good—just what I aim at. He has a better eye for colour than form. Mine are daubs. . . . *Dauntless* has arrived from England, and returns almost immediately. Ryder looks very happy, and in good condition. I have received letters from each of the ships of my squadron on the coast of Kourland. *I* left at the right time. Nothing has been done since—not a prize taken. In fact, trade had been put an end to. Gen. Douglas is very happy. Before I sit down to dinner I must tell you the motto we have adopted: 'Movit Amphion lapides canendo.' Is it not apropos? From Horace, liber iii. carmen xi. Tell R—— to translate it. Is it usual for flowers to last so long? I have had two fuchsias in blossom from the end of May, and they are so still. I have a rose just coming out, but the geraniums are past. . . . We are anxious to hear what

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[1] Their Lordships acquainted the Commander-in-Chief "that they fully concurred in the approbation expressed by him, and were highly gratified at this proof of Captain Key's seamanlike activity and ability."

you people at home will say about Bomarsund. The 2400 prisoners will please the rabble. We hope to hear soon of the fall of Sevastopol, which will be a serious blow. I think the Czar is on the decline; but Sevastopol is not taken yet, and I think will prove a stiffish job. . . . We are meditating a formidable attack before we return, but 'twill end in meditation, I imagine."

The *Amphion* now lay about the Aland Islands for some days. Key writes thence on 27th August—

"All my castles in the air have evaporated, and my hopes scattered to the winds. The *Curaçoa* is given away, and I am wretched! . . . I have nothing to tell you since I last wrote. The two generals have gone in two steamers to reconnoitre Sveaborg, but they can have no serious intentions in that direction at this season, I should imagine. The *Dauntless* has just passed on her way to England, but, as she has to keep company with *Valorous* (who has stove her bottom in), I did not write by her. I went on board to see Ryder, who has really been very badly treated by the admiral. He (Sir Charles) wrote a most abusive letter to the Admiralty about Ryder, which was so bad that they told him that they feel obliged to write to Sir Charles to try him by a court-martial, for which purpose he was to bring special charges against him—his letter being merely general. Sir Charles writes home to say that he has no charges to bring against him, and will not try him. So the Admiralty very properly say that the former letter is null and void, and is to be considered as not written. He has taken some unaccountable dislike against Ryder, whose zeal is unbounded. If *we* had to try him out here, the chief would not have gained much by it. H—— has been kindly calculating my prize-money for me. He makes it £8000! If I get £800 I shall consider myself fortunate. I send you a wild heartsease I found growing on a rock yesterday."

On the 11th September, Key received orders from the commander-in-chief to proceed to his old station off the Gulf of Riga, where he would probably find the *Archer* and *Conflict*, both of which he was to take under his orders, and "maintain the blockade of the coast as long as he could without risk to his squadron. When he thought it necessary to raise the blockade, he was to repair to Kiel for orders."

From his old anchorage off Memel, on the 13th September, Key wrote—

"I am told that something better than *Curaçoa* is awaiting me in England. I don't know what it may be, excepting a wife. But I imagine it is a 50-gun frigate. This would be glorious; and, whether it comes or not, the motive for giving it to me is what I covet."

The Baltic in the short summer and the long spring and autumn are two different places. The open roads along the coast of Kourland, where alone anchorage was to be found, were no security in the heavy gales that set in so suddenly, and the *Amphion* had much hasty weighing and putting to sea, under short sail and occasional steam, to put up with. The romance of the war—what there was of it—seemed over for the year, and the trouble and weariness remained to the rear guard of the British Fleet.

"I have nothing to tell you," writes Key, off Memel, on the 21st September, "since I last wrote, save that we have had the most wretched weather. I have been at Memel, unable to communicate with the ship for a week, but have done some good work in collecting evidence regarding the blockade; for which purpose Dr. Deane, an advocate from Doctors Commons, has been sent out. I have seen a good deal of him, and like him very much. . . .

"I shall not get to Copenhagen as I hoped, but I am to remain on this station as long as I consider it prudent to do so; rather vague and unpleasant instructions. . . . Do not expect me home in October; I fear that I shall not see you till December—worse luck! We ought not to leave these waters till then."

The Commander-in-Chief, in the *Duke of Wellington*, had gone up to Nargen, in the Gulf of Finland, and thence, on the 30th September, he sent orders to Key and his squadron to place themselves under the orders of Captain Watson, C.B., of the *Impérieuse*, who was to be left in charge of the Baltic when the main fleet quitted it.

Off Lyser Ort, at the entrance to the Gulf of Riga, Key wrote on the 10th October—

"I have neither had matter to write about nor opportunity of sending a letter for some time. We have had nothing but gales of wind, and very severe ones. The weather has now changed and become cold, with the most transparent blue sky both by day and night that can be conceived. The papers spoke the truth when they said that we had captured and destroyed eighteen boats laden with corn.[1] In doing so, four boats were capsized in the surf. Fortunately no lives were lost. I took some of the poor fellows to whom the boats belonged on board, and carried them to Libau, where I landed them with a flag of truce. I went on shore myself, and you cannot think how obsequious and grateful the authorities were. I merely went to look about me, but I told

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[1] Captain Key thus describes the occurrence in a letter to the Commander-in-Chief, dated, "Off Libau, 2nd October 1854."

"On the 23rd (Sept.) the *Amphion* and *Archer* anchored in Memel Roads. Towards sunset we observed a large number of boats running down from Libau in the direction of Memel. The boats of the two ships were sent to intercept them, and they secured or destroyed eighteen large Russian boats laden with corn before midnight. One of them was chased on shore on Prussian territory, and brought off. Lieutenant Forbes, of H.M.S. *Archer*, was sent with several of them into the harbour of Memel, as the weather was threatening and a westerly them that if we took any more boats, the men would be sent to England as prisoners; this will deter them.

"The people told me there that Memel had been on fire for three days, and was almost totally destroyed. This horrified me, and I proceeded at once in the ship to ascertain if it was true. I found the town still burning, and its destruction to have been more complete than I could have conceived possible. It broke out during one of our tremendous gales, and the people seem to have done nothing to prevent it from spreading. Eight hundred families are houseless, and the property destroyed is valued at a million and a quarter sterling. The houses saved are solitary exceptions. At this season it is doubly disastrous, as they cannot build in the winter.

"You are premature, I imagine, in telling me that Sevastopol has been taken; no doubt it has by this time, but the news then could not have arrived in England. It is certainly a glorious success. We can now play with the Czar, having gained our object. We shall do nothing more in these waters this year, and next year I hope we shall have a change of leadership—indeed we must. Between ourselves, I believe the captains would refuse to serve under our present chief. He is amazingly unpopular, though I ought not to speak ill of him. . . . We have at this moment what we must call a beautiful night in the Baltic—a clear sky and a bright moon; but we are under treble reefed topsails and reefed courses, and pitching our bows under. . . . Next year, if we return to the Baltic, we shall, I hope, do something better than make prize-money. How thankful I am for the continued good health of our crew! The *Arrogant* and ourselves are the only two ships that have escaped the cholera, and it raged at Bomarsund while we were there to an awful extent. Out of 8000 men landed, 800 died in a few days. All the ships suffered more or less. I did not mention this at the time, and I see the papers very wisely have not talked much of it. I never saw men healthier and happier than the *Amphion's*.

"*October* 13*th*.—With us it is the most lovely day we have had this year. Indeed, for three days we have had the most exhilarating weather. It is happiness to breath such air. . . . I am more in the dark concerning the movements of our fleet and our Commander-in-Chief than you can be. I have not received a line from him for weeks. Yelverton has written to me, and others, but they know nothing of the chief's movements, save that he is anxious to leave the Baltic as soon as possible. I am happy to say he is in a very laudable state of anxiety concerning this squadron, as we are on a most dangerous coast—a dead lee shore in the gales which prevail at this season, and no shelter of any description; but I have an especial dislike to being wrecked on an enemy's coast, and therefore shall avoid it if possible."

On the 6th November, Key wrote—

"I have been off the entrance of the Gulf of Finland for the last four or five

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breeze was increasing. In crossing the bar four of the boats were upset, but fortunately no lives were lost. Lieutenant Forbes immediately wrote to express his regret that a boat had been taken off Prussian territory, and delivered her up to the authorities. The wind increased the following morning, and we were obliged to put to sea. The destruction of so large a number of boats (the *Archer* having captured three early in September) may probably put an end to the coasting trade, which has been carried on between Libau and Memel to a considerable extent."

days, and could not get south owing to a heavy gale, with snow. Certainly the weather at this season is worse than I had conceived of, even in these seas. I hope still that we shall be in England by Xmas, but even had you been within reach I should not have seen much of you, for all my attention will be required to prepare the ship for another campaign. . . . Have you seen the pamphlet written by Mr. Roger (late of *Tiger*)? I was much disgusted with it, and am glad to see the papers condemn it also. . . . We shall not be sorry to get home, though we cannot but feel that the few ships remaining in this sea so late in the year are doing something to redeem the lost credit of the Baltic fleet. Not a rag of canvas is to be seen from one week's end to the other but our own."

On the 9th of November, Captain Watson wrote from the entrance to the Gulf of Finland, that he had information that the Russian Fleet was about to put to sea, and ordered *Amphion* and *Conflict* to join him, leaving *Archer* alone to blockade the coast. On the 17th Key was up with the *Impérieuse*, and wrote—

"I have three minutes to tell you that we are all right, though very cold, and enduring the most dreadful weather I have ever seen. I cannot write more, but do not expect me in England before New Year's Day. We are expecting the Russian Fleet out to drive us away. I hope they may come. They will catch a Tartar."

But there was no such fortune for the rear guard of our fleet, and *Amphion* was presently back again on her old ground, the weather worse and the monotony greater than ever. Relief came on the 26th of November, when the ship made for Faro Sound. She coaled and provisioned there, and started homewards in company with *Cruiser* on the 3rd December. On his way to Copenhagen, on the 4th December, Key wrote—

"I hope to be at Copenhagen to-morrow or the day after, and we shall then learn whether we go home direct, or wait further orders. You can imagine the feeling which pervades the ship at our being homeward bound after the trying work we have had. We have been for three weeks at the entrance of the Gulf of Finland, with continued gales and snowstorms, the sea breaking over our decks and freezing in heaps as it touched the deck. I lost the best man in the ship overboard at night.[1] He was benumbed, and lost his hold. We lowered a boat, but did not save him, and the boat's crew were nearly drowned.

"I shall be glad to get to England, being anxious to get our repairs under way. I fear I shall not see much of you. . . . Our news from the Crimea are [*sic*] painful, but I have no fear for the ultimate issue, if we do not attempt to assault the works. We cannot spare men for that work, but should batter them with cannon until they are fairly silenced. We left Faro yesterday, with my dear friend Geo. Douglas in company. I hope he will be promoted when he gets home.[1] He is a subdued John Moore.[2] I have seen a great deal of him out here."

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[1] G. Wright, captain of the forecastle. He fell overboard on the 26th November.

The *Amphion* arrived at Copenhagen on the 6th December; sailed thence on the 13th, and moored in Sheerness harbour on the 21st, concluding the year in preparing to strip the ship for a complete refit.

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[1] He was promoted 10th of May 1856, and retired as a captain 1st July 1866.

[2] Key's friend, Captain John Moore, then in command of the *Highflyer* in the Black Sea.

CHAPTER XII

THE *AMPHION*—1855–1856

THE *Amphion* underwent a complete refit during the winter months of 1854–1855, the ship being stripped and cleared out, while the ship's company were "hulked" on board the *Nymphe* first, and in the lofts in the dockyard secondly. The note, that on the 9th of January they were paid wages and granted twenty-seven days' leave of absence, takes us back a century in the way of custom, to a time when wages were always in arrear, and the theory was that there was to be no leave unless each man had a bag of money in his pocket, which he was expected to waste or be robbed of in a few days, and then come back to work for more.

The ship was fully ready for sea on the 24th of March, when she proceeded out of harbour and anchored at the Nore. On the 27th Key wrote—

> "After I wrote to you this afternoon, a steamer came alongside with our orders to proceed to the Downs, and if the squadron had left I was to follow to the Baltic. I shall leave at 4 a.m. to-morrow (Wednesday), and the next you hear from me will probably be from Elsinore. The weather is fine—the glass rising; and all promises well.
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> "The negotiations certainly have a peaceful tendency. Do you observe that Nicholas always began his addresses with professions of his desire for peace, but urged on the war? whereas Alexander II. begins with a determination to carry on the war, and I believe will come to a peace if he can."

The *Amphion* accordingly went to the Downs next morning, where she found what was then called "the flying squadron,"[1] under command of Rear-Admiral Bains, already under way. Key took his station as sternmost ship in the weather line, and they all sailed away for the Baltic. On the 31st of March, Key was off the Skaw, and wrote—

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[1] It consisted of *Impérieuse*, Watson; *Euryalus*, G. Ramsay; *Arrogant*, Yelverton; *Esk*, Birch; *Tartar*, Dunlop; and *Archer*, Heathcote.

"We have had wonderfully fine weather to cross the North Sea, and it is only this morning that anything like a strong breeze has sprung up, which is dead against us, but I have still hopes that we may get in to-morrow. The ship is somewhat improved by the alteration in her boilers; she steams and sails better. I had looked forward to having some considerable trouble in getting the men into condition again after three months' disorganisation in England, but I find all—officers and men—so willing, so anxious to do right, that the task is comparatively an easy one. The *Impérieuse* and *Euryalus* go to Kiel, and the rest of us to Elsinore, where we complete with water and coal; and then, if the ice is broken up, proceed up the Baltic. I fell in with the frigate squadron off the N. Foreland, for which I was rather sorry, as I should have preferred a solitary passage out. But we have had such fine weather as more than compensates. . . .

"*2nd April.*—Last night we were all obliged to anchor about fifteen miles below Elsinore, on account of the ice, which is coming through the Sound in large masses. We are now under way, and are pushing through to Elsinore with some difficulty—the current is very strong; but I will close this so as to send by to-day's post. We can't anchor at Elsinore on account of the ice, but go on to Landscrona."[1]

On the 4th April, from Landscrona, we have—

"We have been compelled to seek refuge here, as the ice is drifting about in large masses, and the current being so strong, it is unsafe either to anchor or to keep the sea. On Sunday afternoon, *Arrogant*, *Esk*, and *Tartar* were driven from their anchors by the ice, breaking their cables, and drifted out to sea. We got aground on Monday, but no damage. *Impérieuse*, *Euryalus*, and *Conflict* are gone (?) to Kiel by the Great Belt, but they cannot possibly get there, and must put into some bay for safety. *Archer* is adrift somewhere in the Kattegat still. We are all quite snug here, and I have Yelverton and Fanshawe[2] (of *Cossack*) for companions, which is pleasant."

On the 11th April he wrote—

"We are still icebound in this outlandish place, but the strong winds of the last few days have done much towards our release, and we expect to get out to-morrow. Then we go to Elsinore for a day, and on to the Baltic. We hear that it—the Baltic—is quite blocked up with ice, having been frozen entirely over this year, which is very unusual, and people are still driving sledges across the Gulf of Finland. We have been very fortunate to get into such a snug harbour. The *Impérieuse* got on shore in the Great Belt—had to get her guns out, etc.; was twelve hours before they could start her. Luckily, it was smooth water and little wind, or she would have been done for. . . . We have had falls of snow for three days; the winter seems interminable, nevertheless our men are comparatively healthy—a very great blessing. I have perpetrated a sketch in the snow—oh! so cold! The Landscrona people are so proud of our visit that they have sent for the artists from Stockholm to make pictures of their town with the

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[1] A little farther north, opposite Copenhagen.

[2] The present Admiral Sir E. Fanshawe, G.C.B.

British squadron in the harbour. Such large ships have never before entered. They have also established an electric telegraph for our especial use! . . . Fanshawe, of *Cossack*, has his brother-in-law with him, Mr. Cardwell,[1] . . . a pleasant, quiet barrister. We have snug little dinner-parties among ourselves every evening. Yelverton is a charming senior officer, but he is not in good health, poor fellow! He suffers continually from influenza; we have, nevertheless, pleasant *tête-à-tête* evenings.

"*April 14th.*—The ice has entirely left this part of the world, and we are now pushing on for the Gulf of Riga, to establish the blockade as soon as possible. I am now anchoring at Copenhagen, and must take this on shore. . . . We leave at daybreak to-morrow; the weather is promising well. Sulivan arrived at Elsinore yesterday in the *Merlin*. The fleet has not yet made its appearance. Probably I shall not see our Commander-in-Chief for some weeks."

The *Amphion* got away on the 15th as expected, and found herself pushing up over her tracks of the last year, but this time through fields of ice. She was once more off Libau on the 17th, and was full of the wearying and unsatisfactory duty of "warning" neutral ships that the coast was blockaded, and that any attempt to run the blockade would entail their capture. On the 22nd of April, on his old ground at the northern part of his station, off the island of Ösel, Key wrote—

"Here we are, boxing about on our old cruising-ground, waiting for the *Impérieuse* to take us up the Gulf of Finland. The ice is breaking up fast, though we had considerable difficulty to get here. We were for twenty-four hours alternately immovable and progressing. We ought now to be off Revel, but it would seem as if all energy and enterprise were buried at the close of last war. I am so longing to get a letter from home—not one line have I had since I left. When Nelson was here in 1801, he complained bitterly that they were thirty-five days without receiving letters; I have now been thirty,—fifty-four years later. The fleet has passed the Great Belt, and probably my letters are on board the flagship. . . . It is still very cold; freezing hard at night, and the thermometer at 33° at noon; but we have fine clear weather, and blue sky, which is cheerful.

"I have re-established my garden, though not quite in its former splendour. The frost makes me anxious for my heaths; I have two roses in bloom.

"I am pleased to find that the sailing of this ship is much improved. Yesterday we beat *Arrogant*, *Cossack*, *Tartar*, and *Esk*, though it was not a regular trial. This cold weather causes a heavy sick-list; so many rheumatics and catarrhs.

"*April 28th.*—I have been all this time without an opportunity of sending a letter. It is trying. We first established the blockade of the Gulf of Riga and coast of Kourland, and, after cruising there for a few days, Watson[2] joined us, and then he and I entered the gulf to endeavour to reconnoitre Riga, but we found it entirely blocked up with impenetrable ice; so we returned, and are now cruising off the entrance of the Gulf of Finland, much to my disgust, for we ought to have taken advantage of the clear weather we have lately had, to reconnoitre Sveaborg. The fogs will be on us very soon, and then we can do nothing. . . .

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[1] Brother of the late Lord Cardwell, whose sister Captain Fanshawe had married.

[2] Captain Rundel Bruges Watson, of the *Impérieuse*.

"*Sunday, 29th.*—The *Impérieuse* is running down towards us, and I think will send a vessel to the Admiralty to-day with despatches, so I must close this. I am not in spirits to write—I am so disappointed at our inactivity. . . . I must tell you that we are sailing so remarkably well. We beat all the ships in the advanced squadron—*Impérieuse*, *Euryalus*, and all. I am now going on board to see Watson, and I think between us we shall manage to get up to Sveaborg in a day or two. It is now or never. If these Russians can be brought to try their strength at sea, it will be now, for they know that we are out of reach of our fleet."

Nothing came of Key's hopes, however. On the 10th of May the ships were still at the entrance to the gulf, and on that day Key witnessed a bad collision between the *Impérieuse* and the *Tartar*; the former carrying away her bowsprit, and the latter lost her mainmast and her mizzen topmast.

Meantime the main fleet had been pushing up, and had passed the advanced squadron. Key reached Nargen Island, on the south side of the gulf, which was the headquarters of the fleet for the rest of the year, on the 12th of May, and there found the flagship of Rear-Admiral Sir Richard Dundas, the *Duke of Wellington*, and eight other steam line-of-battle ships, were constantly coming and going.

Amphion having coaled, and made herself otherwise ready, Key was, on the 15th of May, ordered to take the *Firefly*[1] under his command, and to proceed to the Aland Islands, to ascertain whether there had been any attempt on the part of the Russians to reoccupy them. Key was off on the next day, but, being stopped by fogs, did not arrive at Bomarsund till the 17th. On the 24th he was back again at Nargen, and on the 26th wrote—

"We are on the point of leaving this anchorage for one nearer Cronstadt, off Leskar; and Sulivan and I, with some other vessels, are going to reconnoitre some forts in Biorke Sound.

"I like our chief more, daily, and the captain of the fleet[2] is doing remarkably well. Poor Yelverton is still at Faro, with a large number of his crew laid up with smallpox. It is going right through his ship; there has been a great deal in the fleet, also of measles.

"I visited Bomarsund the other day to ascertain if the Russians had taken steps towards rebuilding the forts, etc.; they have not. While there I had a case of smallpox break-out, so I rattled down to Faro without orders,[1] and landed him, after which I fumigated the ship, and took every precaution I could think of to prevent infection, since which, thank God! no case has appeared. But we are not considered free until a fortnight has elapsed. Two of the midshipmen have the measles, so I keep clear of them. . . . I have to write to the mids' fathers about their measles, so I cannot say much more now. Our weather is becoming fine, but the men still suffer from sore throats and colds. Half my officers are laid up, including Wodehouse.[2] I am looking forward to getting a sketch of Cronstadt, as that is all the dealing I expect to have with it.—Signal to weigh! so good-bye!"

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[1] Captain H. C. Otter.

[2] Captain Hon. F. T. Pelham.

On the 28th May, Key wrote—

"We are now about twenty miles from Cronstadt, and I think the chief will take the frigates up to-morrow to reconnoitre. *Impérieuse* and *Arrogant* being disabled, *Euryalus* and her ladyship[3] represent the frigates, which is a pleasure for us, though I wish most heartily Yelverton were with us. His people are getting better. . . . My measly youngsters are getting well fast; they are now writing in my cabin. I have just been asleep over my writing-table. I had not much of that article last night. . . . I can't tell you what a difference there is in the pleasure of serving in this squadron compared with last year. Our weather is still cold, though fine; this is an advantage, as it may keep off the cholera, which is very prevalent at Cronstadt during the summer."

On the 5th June the admiral gave Key orders to "proceed to cruise near the port of Helsingfors, for the purpose of watching the movements of the enemy's ships and intercepting the traffic along the coast"; and he was to continue on this service till further orders, "communicating occasionally with the senior officers of any of H.M. ships which may be stationed at Baro Sound and at Nargen, and forwarding communications to the admiral, either through the officer at the latter anchorage, or by any vessels which he might fall in with on their passage to join his flag." Key was off at once, and, reaching an anchorage near Helsingfors (Sveaborg) next day, he then wrote—

"I left the fleet off Cronstadt yesterday, and am off Sveaborg to watch their movements here—all alone! We are now at anchor off the harbour, and no English vessel within thirty miles of us!

"*June 11th*.—We have been lying off the fortifications for four days, closer even than any of the small vessels have been in to reconnoitre. We hear their bands playing and drums beating, and yet these sleepy-headed fellows will not send their steamers and gunboats out to try and take us. The navigation is wonderfully intricate, which gives us some employment. Since Friday we have had a very pretty island close to us, quite destitute of human beings, but covered with what I infinitely prefer—wild flowers!—lilies of the valley, heartsease, etc. I am now running over to Nargen to get letters and send them; get bullocks, and communicate with the admiral. Perhaps I shall manage a run on shore with Muff.[1] I feel inclined to roll in the grass directly I land—it is so refreshing. Our weather just now is delightful; it has sprung into summer all at once, and the trees and flowers on Miolo[2] appeared racing which should be first in bloom. We have suffered considerably from smallpox and measles, but are getting better now. Don't mention this to C——. Everyone must feel in good health this weather, though it is weakening—the sudden change."

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[1] Nevertheless, the Commander-in-Chief approved of his action.

[2] Armine Wodehouse, at this time first-lieutenant of *Amphion*. Died a commander in 1859.

[3] Some allusion to the *Amphion*, which is not discoverable.

Getting back again across the gulf, the *Amphion* was daily on the move amongst the islands about Sveaborg, taking note of all that was going on. An official report of 23rd June describes her first brush with the enemy's batteries—

"I have the honour to inform you that on the morning of the 20th inst. I anchored in H.M. ship under my command off the north point of the island of Miolo, for the purpose of carrying out your orders 'to watch the movements of the enemy's ships and stop the traffic along the coast.' Our position effectually prevented any vessel from passing or entering Sveaborg by the ordinary route; but I soon observed that coasters and other small craft, laden with granite, etc., for completing and increasing the fortifications, entered Helsingfors harbour by the eastern passage, which, though intricate and shallow, is navigable by vessels of light draught. Wishing to ascertain if I could take up such an anchorage that the approach to that channel might also be closed, and at the same time to reconnoitre the coast, I weighed on the morning of the 22nd, and proceeded to the north-eastward.

"We unavoidably passed within range of the batteries forming the outworks of Sveaborg, on the island of Sandham, which somewhat annoyed us; and, on nearing the islands of Storholm and Erstholm, three other batteries lately constructed, and three gunboats, opened fire on the ship. As we were then obliged to proceed with caution, with boats ahead, on account of the intricacy of the channel and numerous rocks, I thought it advisable to disturb the accuracy of their fire by returning it, and we effectually did so. When off the island of Wellinge, finding no passage safely practicable for the ship, no secure anchorage, and having accomplished my purpose of reconnoitring the entrance, examining the channel, and proving to the trading vessels that we could follow them there, I deemed it prudent to return by the same passage we had entered. We returned, skilfully piloted by Mr. Batt, the master, and engaged the batteries as before.

"I regret to have to report the loss of one man, Geo. Quenwell, leading seaman, killed, and one wounded, beyond which the ship suffered no serious injury, though frequently struck.

"I can but attribute the little damage received from five batteries, mounting from four to twelve guns each, together firing at H.M. ship with shot, shell, and red-hot shot, to the diversion caused by the accuracy of our own fire.

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[1] His dog.

[2] An island close to Sveaborg.

"It gave me great pleasure to observe, as it does now to report, the steadiness of the seamen and marines, which was much contributed to by the example of Lieutenant Wodehouse and the rest of the officers."

Still off Sveaborg, on the 6th July, Key writes—

"I am relieved from much of my anxiety on this station, which has been considerable while alone, as *Dragon*[1] is placed under my orders. We have been at anchor, very close to Sveaborg, during the last week, and I have been amusing myself with nocturnal sounding expeditions. You should see my boat and crew going away for their work! We look like ghosts in a phantom boat. The boat painted white—a dash of grey perhaps—and the men and I in white shirts with belts and pistols. Even in these twilight nights they can see us but a very short distance. I have placed an embargo on Stewart's going. He is a married man with two children, so I tell him to be prepared to bring his ship to my assistance, etc., which is an excuse for preventing him. He is a glorious fellow! Sir E. Lyons said of him in the Black Sea, from which he has just returned, 'His chivalrous bravery is unequalled.' . . . Our weather is still fine; not so hot as it was for a short time last year, and more healthy; very little cholera. What we intend to do up here I cannot say. I fear Cronstadt is given up for want of a sufficient gunboat flotilla. I have sent a plan for an attack on this place (Sveaborg), but with hopes only of partial success.[2] *Impérieuse* is expected daily; probably *Dragon* will find him at Nargen. It is not unlikely that he will relieve me here, being my senior officer. I have received most complimentary letters from the fleet regarding our reconnaisance the other day. The commander-in-chief is more guarded in his terms of approbation.[3] I knew he could officially approve very warily; but I hear now he speaks of it in private, which is better."

The day before this letter was written, a great nomination to the Order of the Bath had taken place at home, and Key's name was amongst the C.B.'s. His remarks on hearing the news are singularly characteristic of the man, and of that honest and impersonal way of looking at things which was a part of his strength. He heard of the honour before the 17th of July, and on that day—off Nargen—he wrote—

"They have made me a C.B. among a host. I cannot tell you how disgusted I am! I am indeed, as I have looked to *earning* it, and I have not done so. I am not speaking comparatively (with the rest on the list), but positively. But there is no help for it now, I suppose, so I must grin and bear it. I hope Sir

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[1] Commanded by Captain W. Houston Stewart,—the present Admiral Sir Houston Stewart, G.C.B.

[2] There is no other note of this plan in Sir Cooper Key's papers.

[3] None of these letters are preserved.

Chas. Young[1] will not suffer, but I don't intend to pay any fees for it. I cannot write more now—we shall be at something before long."

It was by this time known that a great bombardment of Sveaborg was contemplated; gun and mortar boats had been arriving in a constant stream from England and France. There was a great flotilla of all classes of ships at Nargen in Key's view when he wrote as above, all intended for the coming attack. Key was therefore looking for some opportunity of "earning" the decoration, which it was his opinion had been too easily conferred upon him. He was soon back on his old ground, feeling over all the approaches to Sveaborg and maturing his information. Full of hopes of what he might think real distinction, it was no wonder that when he found himself back at Nargen on the 3rd July, with his hopes apparently dashed, he should say—

"I can think of but one subject just now, and I know you will feel for me. I have had a squadron of four vessels for the last week in the neighbourhood of Borgo, and when returning, our main shaft—that is, the axle of the screw—broke, which of course disables the ship. The same day we were sent for by the admiral to join him at Nargen. He wanted us to *lead* the ships in to attack Sveaborg. When I told him of the accident he said, 'I don't know what I shall do without you.' And here we are! We are doing our best to repair it, and hope to be ready in a few days; but either to-day or to-morrow, or the day after, they are going over in the mortar vessels to bombard only. The ships will not attack; we do not look for much result; but to be shut out from this even is very trying. I am in hopes of getting ready in time to take part, and am working day and night."

While in this anxious position, and in a state of mind which made him—according to his own estimate, but undreamt of probably by those in hourly communication with him—"ready to knock anybody down who came near him," it must have been excessively trying to see, on the 4th of August, the "block ships," the *Cornwallis*, *Russell*, and *Hastings*, weighing, and towing out behind them a group of gun and mortar vessels destined for the attack. It would have been worse to see the major portion of the flotilla part company for Sveaborg on the 6th. But by that time it was pretty certain that the repairs to the shaft were successful, so that at three o'clock on the morning of the 7th the *Amphion* was under way and crossing to join the fleet.

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[1] Garter King of Arms.

Key found the fleet assembled in force off the fortress, with the gun and mortar boats either in or drawing into position. But Key was to have as much hand in what was to come as it was possible to give him, and early on the morning of the 9th he came round to near his old anchorage at Stora Miolo, just out of range of Sandham batteries forming the left flank of the Sveaborg defences. Here were already the *Cornwallis*[1] and *Hastings*,[2] and all were under orders to attack the batteries when the fire should open from the gun and mortar boats on the central part of the works. He tells the story in a letter from Nargen, dated 14th August, but says little of his own share in it—

"I have a long story to tell, and not much time to tell it. But for our dear chief's sake, I am sure you will all be pleased to hear of our successful bombardment of Sveaborg. I think I told you that, on my return from Borgo with the small squadron I had then, we broke our main shaft—the axle of the screw. But by working night and day at Nargen we were ready to leave for Sveaborg a few hours after the fleet. The attack was intended to be made by mortar-boats and gunboats only, against the fortifications which protect the arsenal, building-yard, and government buildings. Sulivan had the task of placing the mortar-boats, which he accomplished wonderfully. The ships were not to be engaged, but three of us, the *Cornwallis*, *Hastings*, and *Amphion*, were ordered to divert the attention of the batteries on the island of Sandham, the eastern defences of Sveaborg.

"We opened fire on Thursday morning—entirely along the line; by noon two enormous explosions had taken place, and the buildings were on fire in several places. The fire continued with scarcely any interruption until Saturday morning, when our mortars were nearly all split or unfit for service. By this time the entire works inside the fortress, except the large buildings, were destroyed. These are the works which the fortress was built to protect, and therefore, though it would be satisfactory to destroy the batteries, yet it would be useless and the success doubtful.

"Now listen to the wonderful part of this attack. All this has been done without the loss of a life; a few wounded (we had three), but none dangerously. My clerk, Mr. Sturgess,[3] is wounded severely in the jaw and eye, poor fellow!—but he is doing well. We can form no idea of the loss of the enemy, but it must have been very great.

"On Monday morning we left Sveaborg in ashes, and returned to Nargen; our chief wisely attempting nothing that he did not feel he could complete. . . .

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[1] Captain G. G. Wellesley, afterwards Admiral Sir George G. Wellesley, G.C.B.

[2] Captain R. Crawford Caffin. Died admiral and K.C.B., 1883.

[3] Retired as paymaster-in-chief, 1884.

"The admiral has some idea of attempting Vyborg, but it is not decided. I am in favour of it; Sulivan against it.

"You have seen our chief, and can judge what an undemonstrative man he is. Well! after the affair was over, and Sulivan went to congratulate him, he shook him warmly by the hand, and said—almost choking—'I owe you a debt of gratitude I can never repay. Everyone in the fleet knows that our success is due to you,'—and tears dropped from his eyes, which seem as if they had been dry since he left his mother's lap! No one knows of this but you, so do not talk of it beyond your circle. . . . You will feel with us, I am sure, the wonderful way in which the Lord has shown Himself on our side! . . . Our mainyard is shot in two—among other hard knocks we received."

I had the honour of serving in H.M.S. *Hastings* on this occasion, and I well remember the feelings with which the officers regarded the arrival of the *Amphion* to take part in the action. It was perfectly understood by all, that when the three ships weighed at half-past seven on the morning of the 9th of August, to engage the series of batteries which crowned, half hidden by fir trees, the higher ground of the island of Sandham, Key would push in closest, and remain under fire the longest, be the other who he might.

The Russian shot, though plentiful, were not very well directed. The *Hastings* only had some ropes shot away; the *Cornwallis* was less fortunate; but it appeared to those looking at *Amphion* as if she must be suffering heavily. She was seen to be cautiously working her way in and feeling for deep water to allow her to do so, running, of course, the greatest risks of grounding in the unexplored water. It was observed that her mainyard was shot through, and it was thought at one time that she had taken fire; but there was a consensus of opinion that her commander was as fortunate and as skilful as he was daring, so that no actual anxiety was felt—only admiration for the young commander, who had carried with him the sympathies of high and low.

The three ships spent two hours and a half in engaging the batteries and in driving off some gunboats, which made a feeble show of flanking the fire of the works on their extreme left. Then, at half-past ten, the ships came out and took up their old anchorage under Stora Miolo.

Writing on 28th August, Key describes his proceedings—

"I am now returning to the commander-in-chief (at Nargen). . . . The admiral is getting anxious about finding a secure anchorage for the fleet, as the winter gales have begun already [*Amphion* had experienced one on the 21st and another on the 24th]. He sent me to examine the islands of Lavanran and Seskar, to let him know what I thought of the anchorage there. It will not do; and I think he can't do better than remain where he is (at Nargen).

"We shall not be home any earlier this year than last, I fear. Oh dear! we have a heavy three months before us; but it is such a pleasure to serve under our present chief! I fear the papers seem inclined to overrate our success at Sveaborg, for which I am sorry, as there will be a reaction. The destruction was very great, but not entire. The fortress is as strong as ever, but it protects nothing—a thick shell with the kernel gone!"

During another blockading expedition,—this time at Libbo Fiord, east of Helsingfors, on the 7th September,—we have some moralising over the prospects of what are called successful naval officers—

"It is a hard position for a man rising quickly in the navy with no income besides his pay. When he is employed he is much better off in the lower ranks. It is so rare for a poor man to rise quickly, that it is more difficult for him to keep on equal terms with his brother-officers. Think what the same amount of exertion expended in any other profession, that I have in this, would have produced! Bah! I must not talk in this way!

"I am glad to see that the papers generally take the bombardment of Sveaborg in so sensible a manner. I feared they would overrate its value and then cause a reaction. The fact is, the destruction of government property was immense, but we can no more bring our ships to bear on the fortifications than before. Did I tell you that if her ladyship[1] had had her internal arrangements put to rights in time, *I* was to have had command of the gunboats? You need not fear that *we* shall be absent from any fighting. We are now at an anchorage near Helsingfors, to the eastward, to stop the inshore trade, with two gunboats. Our appearance does that, and we amuse ourselves playing cricket, etc.,—rather cold for it, certainly; but I find that the exercise does my old bones good. I am wretchedly thin, but very few headaches. Nothing like abstemious living for keeping good health; but I *should* like a few weeks on shore amazingly."

Off Sveaborg, on the 2nd October, he writes—

"I am getting rather weary of this, and no work. We are here alone, except two gunboats, blockading Sveaborg, and the coast twenty miles to the eastward of it, and we have far from a pleasant time of it. We—that is, the admiral—have been informed that the Russians are preparing an expedition to capture us some dark night, consisting of 200 boats, containing between 3000 and 4000 men. We are therefore at quarters[1] all night, and precious little rest *I* get. They came out one night—at least we fancy so, for, at about midnight one thick misty night last week, we were disturbed by a ship's fire of musketry close to us. We were under arms immediately, of course, and in the morning learnt from a fisherman that he was fishing near us, and suddenly found himself surrounded by boats which fired on him, saying they took him for an English boat. The rascals, I suppose, thought their firing would put us on the alert, or the mist was too thick, but they did not visit us that night. In addition to this, six steamers have eluded the fleet at Cronstadt, and intend trying to force their way into Sveaborg, when we alone are to stop them.

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[1] This is the second time we find Key speaking of *Amphion* as "her ladyship," and it is not understood.

"Now (5 p.m.) we are indeed alone, for Sulivan has just come in to send our gunboats home; and, as he returns immediately, I must close this sketchy letter."

Back again at Nargen on the 11th October, it was not a pleasant sight to see ships and gunboats daily quitting the anchorage on their homeward voyage; knowing that the excitement of the year was over, and that for the *Amphion* there were still weeks of only toil and weariness. So any change was welcome, and one was promised—

"I am on the point of starting on a very pleasant cruise, if the weather will allow us any pleasure at this season. I am going with *Magicienne*[2] under my orders to examine the south and north coasts of the Gulf of Finland, for a parting reconnaissance; looking into every creek and inlet. A snowstorm is just commencing, so I shall not start till it is over, probably, which may be to-morrow. . . . I see the papers send us to Sheerness again for the winter. It is a horrid hole, but nevertheless for a single man I think it not so bad, for one can go on leave from there more easily—much—than from Portsmouth or Plymouth. I fear, however, I cannot expect nearly so much as last year."

Key then goes on to express his desire that the marriage already arranged should take place during the winter, pointing out that time was advancing, and that he and his future wife had made up their minds to face the question of the moderate income which was before them, declaring at the same time that he did not think it fair towards his future wife to keep an engagement hanging on while he made a second expedition to sea as a bachelor.

The *Amphion* was back at Nargen on the 28th, having completed the reconnoitring cruise without much to note. The time and circumstances were dreary in the extreme. The *Arrogant* had broken her shaft, and was going home,

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[1] That is, ready for action.

[2] Captain Nicholas Vansitthart, afterwards vice-admiral on the retired list, and C.B.

[illegible] Captain Yelverton, one of his best friends. The weather was very bad—

"I have been," wrote Key on the 30th, "not laid up—for I have had too much to do knocking the ship about—but very shaky with influenza, and that sort of thing. To-day I am much better, but I sadly want a little rest."

The early part of November was spent chiefly at anchor, watching points in the Gulf of Finland, such as Hango and Wormsö Roads, with visits to Nargen between whiles. On the 16th of November *Amphion* was there, and Key wrote—

"Shooting is the staple amusement of the squadron, as the weather is very fine, though cold—therm. at 28°. This is a great improvement on last year. No raining, and few gales. However, it is somewhat tedious, especially when I don't get my letters.[1] . . .

"I feel sadly the want of a helping hand at the Admiralty just now. I have no one to back me up—no private friend, I mean, to put in a good word when anything is to dispose of. I have a larger ship now than my standing entitles me to, so I cannot complain, but I do want an increase of pay."[2]

But the ship was drawing homewards. The latter part of November was spent at anchor in Wormsö Roads, near the entrance to the gulf, on the south shore. On the 30th the ship had fallen as far back as Faro Sound. On the 1st December, Key was able to write that he was homeward bound, and expected to reach England earlier than he did in 1854. He was considering his approaching marriage, declaring that he would do nothing hasty or foolish, but declining to be certain that he would not some day do what many would consider imprudent. "We cannot foresee everything," he said, "and must at times trust much."

"We left Wormsö on the 29th. Thermometer at 8°; ice extended half-way from the shore to the ship. Time for us to go! But the weather is wonderfully fine for the time of the year; nothing like the gales of last year."

He had heard from his friend Captain Sulivan, who had written from England—

"He gave me a good account of an interview—indeed of two—with Sir C.

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[1] They were all in the admiral's bag, which had been sent back unopened to Kiel.

[2] Captain Key's pay in the *Amphion* was just under £400 a year.

Wood,[1] where my name was favourably mentioned. I am not without hope of some advance this winter."

On the 8th of December the *Amphion* reached Copenhagen, and on the 16th she was once more moored in Sheerness harbour, after her absence of eight and a half months.

This was the conclusion of Captain Key's share in the Russian War. His name was by this time a familiar one with the public, as it had so long been in the service. He had in all respects preserved and extended his reputation not only as a capable and enterprising commander, but as a man of judgment and as a reliable friend.

There is a distinct change to be observed in his character in these two years. His letters up to the time of his obtaining captain's rank showed the man of reflection as well as the man of action. His letters from the Baltic are chiefly hurried notes, betraying throughout the suppression of reflection and the domination of action in his mind. He was full of his everyday work. Everything was to him an excitement calling out active energies. He must have been by day and by night wholly absorbed in doing what he had to do perfectly, and taking care that nothing slipped through or was slurred over. He did much, and he said little.

Yet it was not really a change of character. It was the old one developing under new circumstances. The strong affections manifest themselves not only as of old, in the remembrances of, and the messages to, the different members of his family, but we can see them breaking out, as it were, in the occasional references to his brother-captains, and to his commander-in-chief in the second year—Sir Richard Dundas.

If we think of it, these were the qualities which marked the greatness, and perhaps some of the weakness, of the greatest admiral we know of,—the desire for completeness, for absolute finish in the work of the war; the anxiety to be as much in the middle of it as possible; the strong belief in himself, which kept him modest and made him bold; the warm heart which won everybody over. These qualities were present in both men, and it is not easy to say how far they might have carried the more modern commander had opportunity offered.

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[1] The First Lord of the Admiralty.

Captain Key in the *Amphion* was a strong disciplinarian. It is not easy in these days, when our men are picked as boys, trained by the navy with care, and highly educated, to realise that in a "crack ship" like the *Amphion*, where everything prospered, and where the commander was universally popular, there should have been an enormous amount of the crimes of insubordination, violence, and drunkenness. Evidently these crimes were attacked by a strong hand. The corporal punishments were numerous and severe. Something may be said on the part of the men, when so much of the life was characterised by the extreme of monotony, if not by the extreme of privation. Scarcely anyone could have been a sharer in the captain's hopes, in his anxieties, in his eagerness. The monotony was relieved to them only by occasional expectations of a brush with the enemy, by the rare capture of a prize, and by the three tastes of the excitements of war which were granted to the *Amphions* at Bomarsund in 1854, and at Sveaborg twice in 1855.

CHAPTER XIII

THE *SANS PAREIL*—1856–1858

ON the 9th of January 1856 Captain Key was transferred from the *Amphion* to the *Sans Pareil*, then lying in Plymouth Sound, and he joined her there on the 22nd. He was taking the place of Captain W. T. Williams,[1] who passed to the command of the *Centurion*. It was so far remarkable that this was Captain Key's third command, and yet he had never "commissioned" a ship, and had not any of the advantages of patronage, and none of the choice of officers, which commissioning a ship then allowed to her captain.[2]

The *Sans Pareil* was a new screw line-of-battle ship, and, except for her engines and boilers, differed little from the sailing line-of-battle ship of that or of an earlier day. She carried twenty-eight 32-pounders on her lower-deck; six 8-inch and twenty-four 32-pounders on her main-deck; four 32-pounders on her quarter-deck; and eight 32-pounders on her forecastle. Though heavier, the character of her armament did not differ greatly from that which Key had met in the *Russell* on first coming to sea twenty-one years before. Her displacement was about 3000 tons. Her engines were by James Watt & Co., of 400 nominal horse-power, and they had only been placed on board the year before. Her coal capacity was only 140 tons.

She carried a complement of 40 officers, 455 seamen and boys, and 125 marines; in all, 620 men, which was a small complement for a line-of-battle ship of those days. Her commander, when Captain Key joined, was Julian F. Slight—a well-known name in those days.[1] Amongst the other officers there were many changes before the ship finally left England.

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[1] Died an admiral on the retired list, 1893.

[2] Several officers, however, followed him into the *Sans Pareil* from the *Amphion*; amongst whom were the cousins Charles and Francis Stirling, the one of whom disappeared in the mail steamer *Boston*, and the other in the training ship *Atlanta*, the fate of neither ship being ever ascertained.

The crews of none of the ships seemed in those days to be well behaved. The frequency of punishment for serious offences was rather striking in the *Amphion*, and things in the *Sans Pareil* did not look better for her new captain. There were thefts, desertions, drunkenness, quitting post of duty, stealing boats to run away with, and so on, before his command was six weeks old. But, as Captain Key was never one to avoid the duty which lay before him, heavy punishments were duly meted out. But it may here be said that the *Sans Pareil* ultimately became what is called "a happy ship," and remained so to an exceptional degree all through the commission.

Although at the date of Captain Key's appointment to the *Sans Pareil*, proposals for peace were already in the hands of the Russian Government, there was no cessation in the preparations for another year's war. Public opinion in England was much excited by what publicists called the failure of the British fleets in the Baltic,—that is, the absence of attempts on the part of the ships to attack the powerful stone batteries of Cronstadt. To meet the popular view, it was considered that by means of light-draught steam gun and mortar boats, to be prepared and used in the same way as those employed at Sveaborg, but in much greater numbers, something effective might be done, even against Cronstadt. No less than 128 light-draught gunboats and gun vessels had, in fact, been added to the navy in 1855 with this object in view, and their completion was energetically pushed forward.

It was intended to despatch the gunboats to the Baltic in four divisions, each under charge of the captain of a line-of-battle ship, and it was in order that he might command the fourth of these divisions that Captain Key was appointed to the *Sans Pareil.* He was ordered to land her lower-deck guns in order to take in the stores necessary to enable her to act as the depôt of the gunboat division. The gunboats at Devonport, which were to form part of his division, were every day advanced towards readiness for sea.

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[1] Commander Slight was promoted into Captain Peel's death-vacancy on 11th September 1858.

The negotiations for peace were not in a sufficiently forward state to justify any relaxation of effort, and when Parliament opened on the 31st of January, Her Majesty announced her readiness to continue the war. By the middle of February a considerable fleet of warships and gunboats were assembling at Spithead. On the 25th an advanced squadron of steam frigates and corvettes sailed for the Baltic. The third and fourth divisions of gunboats were ordered to assemble at Portland, and on the 28th Captain Key, in command of the *Sans Pareil*, loaded up with stores, and without her lower-deck and upper-deck guns, sailed for Portland accompanied by seven gunboats of the fourth division. About the same time the *Impérieuse* and other ships of the advanced squadron passed into the Baltic.

The depôt-ship of the third division of the gunboats soon joined the *Sans Pareil*, and both divisions were continually augmented by the arrivals of fresh gunboats.

It was a busy and an anxious time. Great doubts hung over the result of the negotiations for peace; the advanced squadron was pushing up the Baltic to the edge of the ice; ships of all classes and in great numbers were daily issuing from our harbours to points of assemblage, ready to open the spring campaign. The columns in the newspapers describing the annexation of Oude were lightly scanned at a time when the question of war or peace with Russia seemed the only one of importance.

But towards the end of March it was generally understood that there would be peace, and it began to be rumoured that there would be a great Naval Review at Spithead before the Queen, as a fitting ceremony to close the war, and as a proof to all who chose to understand, that it was not until after two years of war that England began to really exert herself.

On the 25th of March the Lords of the Admiralty, with their flag flying in the *Black Eagle*, paid a visit of inspection to the flotilla at Portland, and on the 28th the *Sans Pareil* and *Colossus*, with no less than 41 gunboats, left Portland in the early morning, and anchored off the Motherbank in the evening. There were already 17 warships at and about Spithead, so that the arrival of the *Sans Pareil* and *Colossus*, with their gunboats, made the total up to 60 sail.

Peace was now assured, so the assemblage was only in preparation for the great review. Peace was, in fact, signed two days after the *Sans Pareil's* arrival at Spithead, and it was publicly announced on the 31st of March.

Before long there were collected to take part in the review—22 steam line-of-battle ships, 3 screw frigates, 16 screw corvettes and small vessels, 17 paddle-wheel corvettes and small vessels, and 160 gunboats; in all, 218 steam ships. It was a force numerically large beyond comparison, but marvellous at a time when steam was, as it were, only just springing into being. Considering that we still had great naval forces abroad, and that the war had lasted two years, the assembly was a momentous display of naval power.

The gunboats had been rearranged before reaching Spithead. They were organised in four divisions, termed White, Red, Blue, and Light Divisions. The White and Red comprised 46 gunboats, the Blue 44, and the Light 24. It was this division that was under Captain Key's command.

There were rehearsals of the intended movements befo
Queen. It was impossible that with so vast a fo
narrow waters, there could be a
simplest character.
exercise

back again; and then, on the 18th, the pivot-ships, round which the two immense lines were to wheel, being put in position near the Nab light-vessel, the fleet weighed and went through an exact representation of what was to be done before the Queen. And then the great day came, glowing with the weather it has been Her Majesty's fortune to enjoy on every great function.

Dry notes in the ship's log assist us to estimate the naval temper of the day, and how a man like Captain Key was affected by it. It happened that a young officer had, two or three days earlier, committed a very serious offence, and had been placed under arrest. This 23rd of April 1856 was no day for rigour. Captain Key opened it by releasing and forgiving the culprit.

After the review was over there was nothing for the fleet but dispersion, and, for most of the ships, paying off and dismantling. But as the British army had to be brought home from the Crimea, some of the line-of-battle ships were chosen for that duty, and the *Sans Pareil* was one. For this duty the guns were to be removed, and it was necessary to make many fittings. Captain Key therefore obtained leave of absence, and, proceeding to Jersey, was on the 28th of April married at Gonville, in that island, to Charlotte Lavinia, youngest daughter of E. A. M'Niell, Esq., of Cushendun, Co. Antrim, Ireland.

On the 30th of May the *Sans Pareil* sailed for the Crimea, and, touching at Gibraltar for a day on the 6th of June, passed on to Algiers and coaled there on the 11th, leaving again the same day. She was at Malta coaling and provisioning on the 15th and 16th; she steamed up the Dardanelles on the 21st, and on the 22nd anchored in the Bosphorus, being in company with several other warships, English and French,—some of the former nationality she had already met at Gibraltar,—and all were on the same quest as herself. Weighing again on the 24th, she anchored in Kazatch Bay on the 26th. On the 27th of June she passed into Balaklava harbour, and began at once to assist in loading transports, removing stores, etc. She finally took on board the 72nd Highlanders, and sailed for England on the 6th July. She anchored at Spithead late on the night of the 29th.[1]

The ship now returned to Plymouth, and, having taken on board her armament again and completed for sea, she joined Sir Richard Dundas's fleet at Lisbon on the 22nd September, and lay there till the 16th of January 1857. Then the fleet, consisting of the *Duke of Wellington*, *Exmouth*, *James Watt*, *Colossus*, and *Sans Pareil*, put to sea for a cruise. On the sixth day of this cruise, which had been wholly under sail, Captain Key found that his rudder-head was sprung, and that the ordinary method of steering was not available. The admiral directed him to make the best of his way to Lisbon, and he did so under sail, as far as the mouth of the river went. It was a pretty bit of the seamanship of those days. Every rudder was fitted with what were called "rudder-pendants," fastened with a ring and copper chains to the outer edge of the rudder just at the water-line. The idea was, that if the rudder-head should be wrung, so that the tiller could not be used, spars should be "rigged out" on each quarter of the ship with blocks at their extremities through which the "rudder-pendants" could be "rove," and, on purchases being applied to the one pendant or to the other, the rudder might be moved from side to side, without a tiller, and by appliances outside the ship altogether. The use of this apparatus was so extremely rare, that it was generally doubted whether it would be found applicable. But it was just the sort of nicety in seamanship to take Captain Key's fancy, and he was no doubt delighted to be able to put it into use, and to steer the ship under sail for three days to an anchorage in the Tagus, and then on the 26th to pass up under steam to the usual anchorage off the city.

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[1] The Rev. Percy Rogers, now the vicar of Simonburn, who was chaplain of the *Sans Pareil*, and to whom I am indebted for some notes of the ship's commission, speaks of Captain Key dwelling in conversation on his continued ill-health in the Baltic, owing, as he thought, to the want of fruit, etc. He had set up in his cabin in the *Sans Pareil* an ingenious plan for detecting at sight the number of revolutions the screw was making. He had bullets attached by strings of different lengths attached to a brass rod. "When the screw made, say, thirty-six revolutions, one vibrated much more than the rest. Should the number of revolutions be increased or diminished, the oscillation of this one nearly ceased, and another took it up; the length of the strings was, of course, determined by experiment."

Mr. Rogers speaks in warm terms of Cooper Key's markedly religious character—of his practice of having evening prayer in his cabin on Sundays, and of his admiration for religious poetry.

It seems to have been while his artificers were repairing the rudder on shore that Captain Key received orders which sent him to England. He got his rudder back on the 7th of February, proceeded to sea on the 9th, and anchored in Plymouth Sound on the 18th.

Troubles in China were at this time coming to a head, and the *Sans Pareil* had been recalled for despatch thither with reinforcements. After receiving a new rudder and a general refit, she took on board, on the 12th of March, 9 officers and 300 rank and file of Royal Marines, under the command of Lieutenant-Colonel Lemon, as well as a number of seamen, and put to sea finally on the 17th.[1]

Her passage, made chiefly under sail, was necessarily a long one. She was at Madeira on the 27th of March; at Ascension on the 20th of April, for coals and provisions; at Simon's Bay, Cape of Good Hope, on the 16th of May, where she lay till the 25th.[2]

Passing through the Straits of Sunda at night, the *Sans Pareil* was stopped off Angier by the guns and signals of H.M.S. *Actæon*, which was lying in mid-channel with orders to intercept the *Simoom* and *Himalaya* that were on their way to China, and divert them to India in consequence of the outbreak of the Indian Mutiny. Passing on with this startling news, the *Sans Pareil* reached Singapore on the 30th of June, and Hong Kong on the 12th July. She was thus 122 days on the passage—a lapse of time which shows how little steam, in its auxiliary form, had done to increase speed, and how the Ministry of that date were justified in sending the reinforcements required for India in sailing vessels.

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[1] Lieutenant-Colonel Lemon died a lieutenant-general and C.B. in 1875. Mr. Percy Rogers observes: "Popular fashions vary. The good folk of my native 'Three Towns' were fairly deranged over the departure of a marine battalion to Zululand a few years later, who returned without seeing a shot fired in anger; while the old *Sans Pareil*, bearing many who would 'come back no more' from the battlefields of India and China, steamed away solitary and quite unnoticed, save from a brief paragraph in a local paper that she was overladen, and would probably terminate her career in the Bay of Biscay! *Sic semper turba remi!*"

[2] Mr. Rogers speaks of Captain Key's interest in watching the change in the deviation of the compass corresponding to a change of latitude; from 1° E. in the north to 23° W. in the south. He attributed it chiefly to the well-known change of magnetism in upright iron,—in this case in the funnel, which was abaft the mainmast in the *Sans Pareil*. At Simon's Bay, Key drew attention, with pleasant humour, to the change that came over the spirit of the flagship's dream, on the termination of Commodore Trotter's command and the arrival of Admiral Frederick Grey,—how slackness of ropes, unsquared yards, and general easiness of demeanour suddenly changed to every outward sign of alertness and zeal.

Captain Key found the *Calcutta*, Captain W. K. Hall, bearing the flag of Rear-Admiral Sir Michael Seymour, K.C.B.; *Sybille*, Commodore Hon. C. G. B. Elliot; *Shannon*, Captain William Peel; *Amethyst*, Captain Sidney Grenfel; *Pearl*, Captain E. S. Sotheby; *Sampson*, Captain G. S. Hand; *Hornet*, Commander C. C. Forsyth; *Haughty*, Lieutenant R. V. Hamilton; *Cormorant*, Commander T. Saumarez; *Opossum*, Lieutenant Colin A. Campbell; and *Inflexible*, Commander John Corbett. There was also the French sailing frigate *La Virginie*, bearing the flag of Rear-Admiral Guerin,[1] and another French corvette. The assemblage was part of the force destined for an attack upon the city of Canton, which, however, news of the most serious character not many weeks old had postponed.

News had, in fact, reached Singapore of "the serious revolt of some of the native troops near Delhi" before the first week of June was out. Sir William Hoste, of the *Spartan*, the senior officer there, had received a request from Lord Elgin, who was then at Singapore on his way to represent the English Government in China, to divert the *Himalaya* and *Simoom*, which were bringing troops for China, to Calcutta. Captain Key had heard the news confirmed at Singapore, but had pushed on to Hong Kong, in the absence of discretionary orders. Lord Elgin had himself gone on in the *Shannon* to Hong Kong, arriving there ten days earlier than Captain Key.

On the *Sans Pareil's* arrival, it had become clear that

[1] Admiral Guerin sailed for France on the 15th, and was succeeded by Rear-Admiral Rigault de Genouilly.

the Indian difficulty was of far more importance than any operations against Canton. The admiral determined to send the *Shannon* and *Pearl* at once to Calcutta, the former taking over the marines which the *Sans Pareil* had brought out; and these ships accordingly sailed on the 16th July.

But it was necessary, as active operations against the Chinese were thus checked, to control their possible counter approaches. Accordingly, on the 1st or 2nd of August, the *Sans Pareil* proceeded to Chuenpee, and on the 3rd and 4th she landed marines to hold the Chuenpee forts, returning herself to Hong Kong. But it was determined to send further reinforcements to Calcutta, and on the 16th the *Sans Pareil*, having previously taken on board 7 officers and 258 men of the Royal Artillery from Hong Kong, was towed to sea by the *Sampson*, which did not drop her for a week. This help was necessary for speed, as the *Sans Pareil* by herself had not coal enough to steam down the China Sea against the monsoon.

The ship reached Singapore, as it was, not until the 31st, but then, having coaled and taken on board 2 officers and 50 rank and file of the Royal Engineers, she put to sea again on the 2nd September, and, after a stay of a day at a port—for coal—was moored off the esplanade at Calcutta on the 17th. It was said locally, that no line-of-battle ship had been in her place since the days of Warren Hastings and Admiral Watson. The marines which the *Sans Pareil* had brought out had been placed in garrison at Fort William, and they were added to by detachments from the *Sans Pareil.*

During the heat of the Mutiny, from the 17th of September to the 31st October, the *Sans Pareil* lay in the Hoogley, Captain Key acting as senior officer, dealing with the stream of transports and troops arriving, and acting as adviser to the Governor-General in everything relating to transport and the naval service. It was not till the 17th of December that the ship again reached Hong Kong.

Sir Michael Seymour, in the *Calcutta*, was up at the Bogue forts when Key reached Hong Kong, but he found orders there directing him to complete with water and supplies, and to join the flag off Wontang Island. Accordingly the *Sans Pareil* anchored as directed on the 19th, but, finding the commander-in-chief was not on board his flagship, but higher up the river, Captain Key, on the 21st, went up to confer with him on board the *Firm* gunboat, returning the next day.

The preparations for the postponed attack on Canton were now almost completed. Some days before the *Sans Pareil's* arrival, Honan Point had been occupied by the allied French and English without opposition. At the same time an ultimatum had been sent in by the Ambassadors of the allied Powers to the Imperial High Commissioner Yeh, stating the demands of the two Governments, granting him ten days for consideration of the same, and informing him that if the demands were not complied with within that time, coercive measures would be commenced against the city of Canton.

The brigade of the Marines and Marine Artillery had been brought up, and, as well as a portion of the Naval Brigade, had been quartered in the large storehouses on Honan. The troops were still on board transports at Whampoa. The total forces in hand at this time were—

From the ships—officers and seamen . .	1489
Royal Marines and Marine Artillery . .	2325
Troops from Hong Kong (59th Regiment) .	800
French Division	968
Total .	5582

Further additions were expected to have been made from the *Sans Pareil*, *Princess Charlotte*, and *Fury*, all daily expected at Hong Kong.

When Captain Key reported himself to Sir M. Seymour, the last word to the High Commissioner Yeh had indeed been spoken. Plain demands had been put before him, and he had replied, Chinese fashion, *à propos* of nothing. So that, on the 18th of December, the Plenipotentiaries, Lord Elgin and Baron Gros, wrote to Sir M. Seymour informing him officially of the collapse in the negotiations, and inviting him, Rear-Admiral Rigault de Genouilly, and Major-General Van Straubenzie, to a conference on board the French ship *Audacieuse*, at noon on the 21st December. Captain Key therefore heard the immediate results of this conference when he met the commander-in-chief. The result of it was a letter to High Commissioner Yeh and the other rulers of Canton, from the French and English commanders-in-chief, informing them that if within forty-eight hours the city was surrendered, it would be occupied without bloodshed, but if not, then it would be attacked.

The more immediate result to Captain Key was his return to his ship, and his quitting her again at 8.45 on the morning of the 23rd in the *Firm*, at the head of the following force—

Commander, 3 lieutenants, 1 acting mate, 1 assistant surgeon, 13 subordinate officers, and 267 petty officers, seamen, and boys, to form part of the Naval Brigade to be organised for the attack upon the city of Canton. The *Firm* towed up two launches, two cutters, and a galley, for landing the force.

The city of Canton lies on a plain, compassed on two sides by the river, and at the foot of a mountain of considerable elevation, called the White Cloud Mountain. Immediately at the back, and forming a termination to a ridge of mountains, are three or four hills of small elevation, but sufficiently high to command the city. On these, at this time, were forts and encamped troops, Manchus, Tartars, etc. These heights were taken in the last war in 1841, when the city was ransomed. The city was surrounded by a wall front 25 feet thick at the base, and lay four square, surrounded, or nearly so, by suburbs. The irregular square enclosed by the outer wall was divided by an interior wall running nearly east and west, into spaces called the old and the new city. The walls were six or seven miles round; the wide top, bounded on its outer side by a parapet, formed an unbroken means of communication right round the city, and therefore put troops who were in possession of the walls in possession of the city also. There were twelve gates in the outer wall.

Inside the walls the city was composed of a dense labyrinth of narrow streets, estimated at 156, not more than 20 feet wide, shut in by houses of no great height.

The attack on Canton was arranged to begin by bombardment of the river faces of the walls, with the intention of breaching them, after which an assault was to be delivered on the eastern wall by the armed force landed on that side.

Between the French and Dutch Folly forts were anchored 25 gunboats beside ships' boats; and the Dutch Folly had been turned into a mortar battery. For many days these vessels had been moving up and taking their positions, the inert Chinese permitting every preparation to be made without interference from them. The population thus crowded up was supposed to amount to a million.

Sir Michael Seymour's flag flew in the *Coromandel*; his own flagship, the *Calcutta*, with the *Sans Pareil* and other ships, whose size forbade them taking a direct part in the proceedings, were left at Tycocktow, 35 miles below Canton. The bombardment was ordered to commence on the 28th of December, under the following arrangements.

The *Actæon*, *Phlégéton*, and gunboats were to open fire on the south-western angle of the city walls, with a view to breach them and impede the communications of the Chinese troops along the parapet to the eastward.

The *Mitraille* and *Fusée* (French), with the *Cruiser*, *Hornet*, and gunboats, were to breach the city walls opposite the Viceroy's residence. The mortars in the Dutch Folly, with the *Niger* and *Avalanche*, were to shell the city, the heights, and Gough's Heights. The *Nimrod* and *Surprise*, *Dragonne* (French), and *Marceau* (French), and gunboats, between the Dutch and French Follies, were to open fire on the south-eastern angles of the new and old city walls, forming the east side of the city.

These several attacks were to commence simultaneously, when a white ensign was hoisted at the fore-topgallant mast of the *Actæon*, and a yellow flag as a corresponding signal was at the same time hoisted on board the *Phlégéton*. The *Hornet* and *Avalanche* were to repeat these signals, and keep them flying as long as they were kept flying on board the other ships.

The bombardment was ordered to be very deliberate, but to be continued day and night. Each gun was not to exceed sixty rounds in the first twenty-four hours.

The orders were, that as soon as the bombardment began, the allied forces were to land at the creek in the Kuper Passage, to the eastward of the city, where the French and English flags were to be planted. The whole force was prepared for landing, in six separate bodies, as follows:—

1. The Sappers and Miners, 59th Regiment, Royal Artillery; stores and ammunition.
2. The French Naval Brigade; stores, etc.
3. The British Naval Brigade, under the command of Commodore the Hon. Charles Elliot.[1]
4. Naval Brigade from Canton.
5. Battalion of Royal Marines, under Lieutenant-Colonel Lemon.
6. Battalion of Royal Marines and Marine Artillery, under Colonel Holloway.[2]

The landing was intended to be carried out in order as above; and, as it was completed, the force was to be disposed with the British Naval Brigade on the right; Colonel Lemon's battalion, the 59th Regiment, and the Sappers and Miners, in the centre; the French Brigade on the left; and Colonel Holloway's Brigade, with the Royal Marine Artillery, in reserve.

After getting into position, the allied forces were to remain in line of contiguous columns of brigade until further orders for an advance to a position for the night were given, preparative to orders for active service on the following morning. The bombardment was to open at daylight, and the forces were to begin the landing at the same time.

The total force to be landed was over 5600 men, the Naval Brigade making up 1554. The latter was arranged in three divisions, all under the command of Commodore Elliot. The 1st Division consisted of the men of the *Sybille*, *Nankin*, *Sampson*, *Racehorse*, *Elk*, and *Inflexible*. It was 584 strong, and was commanded by Captain Hon. Keith Stewart,[1] supported by Captain G. S. Hand[2] and Commanders J. F. C. Hamilton[3] and G. A. C. Brooker.[4] The 2nd Division consisted of men from the *Calcutta*, *Sans Pareil*, *Actæon*, and *Acorn*; in all, 504, commanded by Captain Key, supported by Commander A. W. A. Hood[5] and Commander Julian F. Slight.[6] The 3rd Division was commanded by Captain Sir Robert M'Clure, Kt.,[7] supported by Captain Hon. A. A. Cochrane, C.B.,[8] Captain Sherard Osborn, C.B.,[9] Commander W. M. Dowell,[10] and Commander Charles Fellowes.[11] It comprised 584 officers and men of the *Esk*, *Niger*, *Highflyer*, *Hornet*, *Cruiser*, and *Furious*.

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[1] Died admiral of the fleet and K.C.B., 1895.

[2] Died lieutenant-general and K.C.B., 1875.

The field-pieces of the *Calcutta* were to be landed—three light 12-pounders under Lieutenant Goodenough,[12] and two heavy 12-pounders under Lieutenant Beamish.[13] The two first companies of each division of the Naval Brigade were to carry scaling ladders; every man was to carry three days' provisions with him; and each division was to carry four bags containing 100 lbs. of powder, to be used, if necessary, for blowing the gates of the city in. The dress of the divisions conspicuously differed, so that there should be no confusion or intermixture. The 1st Division was to wear blue frocks and white trousers; the 2nd Division was altogether in blue; and the 3rd Division was to wear white frocks and blue trousers.

The further operations, when the assault was determined on, were arranged as follows:

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[1] Died retired admiral and C.B., 1879.
[2] Died admiral and C.B., 1883.
[3] Became captain, and was killed at the attack on Tauranga, New Zealand, 1864.
[4] Died rear-admiral and C.B., 1889.
[5] Afterwards Admiral Lord Hood of Avalon.
[6] Died admiral and C.B., 1890.
[7] Died rear-admiral and C.B., 1873.
[8] Afterwards admiral and K.C.B.
[9] Died rear-admiral and C.B., 1875.
[10] Afterwards admiral and G.C.B.
[11] Died vice-admiral and K.C.B., 1885.
[12] Killed by poisoned arrow when commodore in Australasia.
[13] Afterwards rear-admiral and C.B.

The 59th Regiment was to be told off for the attack on Fort Lin, supported by a battalion of the French Brigade. Fort Lin was to be afterwards occupied by Colonel Holloway's Brigade. This was to be done on the first day.

On the second morning the whole of the 59th and Madras Native Infantry were to form the covering party to keep down the fire from the walls.

The ladders of the French, Centre, and Naval Brigades were to have been placed over-night as near the ditch as practicable; the parties told off for them were, when ordered, to advance and form the storming party, the remainder being in support.

The French Brigade was to escalade as near as possible to the north side of the "Blind Man's House." The British Naval Brigade was to escalade 600 yards to the north, and the Centre Brigade between the two.

After entering the place, the French Brigade was to form on the open ground inside the wall, advancing southwards to take, close, and occupy the eastern gate. This accomplished, the remainder of the brigade was to move northwards along the wall.

The British Naval Brigade was to form on the wall and advance northwards along the ramparts, taking the north-eastern gate, which they were to open for the artillery and continue to hold.

Colonel Lemon was to form his battalion on the wall, and was to follow and support the French Naval Brigade.

Colonel Graham having formed the 59th Regiment so soon as the walls were in our possession, was to order it to advance in support of the British Naval Brigade, unless he should see that the French Naval Brigade was more in want of his assistance in the attack on the east gate; in which case he was to afford it.

Each battalion was to leave one company on the wall to assist in mounting on the ramparts such howitzers and field-pieces as might not be in position outside the walls. They were afterwards to rejoin their respective brigades.

The whole force was to bear in mind that the principal object was to capture the heights within the city; no more, therefore, was to take place after the capture of the two northern gates, magazine hill, and five-storeyed pagoda till special orders were given.

Colonel Holloway's Brigade being in reserve, he was t superintend the forwarding of the reserve ammunition and the protection of the wounded, and see that such artillery as might be in position was properly supported. He was to occupy as much of the first position vacated by the other brigades as he deemed necessary with a view to oppose any attack that might be made from the hills on our flank and rear. The parole throughout the operations was to be "France and England." The guns on the walls and on the captured forts were to be turned on the city, except the northern ones, which were to be directed upon Gough's and the adjacent forts.

All things were thus in readiness to begin the attack, pending the reply of the High Commissioner Yeh to the peremptory summons of the naval and military commanders.

It was penned on the 25th of December, and was most characteristic. Yeh, with the utmost grace and politeness, recognised nothing, asserted nothing, and promised nothing. He noticed that it was stated that the correspondence had terminated unsatisfactorily. On this point he begged to observe that he had already written six letters expressing his willingness that commercial relations should be resumed on their old footing—the precise demand of the allies being that there should be a new footing. Yeh was of opinion that there was nothing unsatisfactory in this, and that the whole Province was of the same mind with him here.

The records showed, Yeh declared, that these letters truly represented the situation of the city of Canton.

"Discernment and practical knowledge have distinguished the long professional career of the Hon. Admiral Seymour; and if the Hon. Rigault de Genouilly and the Hon. General Van Straubenzie are not yet familiar with all the particulars of the case, a careful inspection of the letters written by me to the Hon. Admiral Seymour will place the whole matter clearly before them."

"It may be observed," Yeh went on with the imperturbable but maddening coolness of Chinese diplomacy, "that the English and French nations have hitherto been celebrated for their good faith. When, on the 12th of December, the nations met the Deputy of the Imperial Commission at the Macao Passage, they displayed in front of their vessels flags of truce. All foreign nations know this rule, and you, the Hon. Commanders-in-Chief, should well consider the proper application of it. The undersigned wish the Hon. Commanders-in-Chief prosperity."

From what point of view Commissioner Yeh thus applied Sam Weller's philosophy of letter-writing, it might be difficult to say—as difficult, perhaps, as to imagine that the allied Commanders-in-Chief would, as Mr. Weller conceived, have "wished there was more." But, clearly, nothing was left to them but to acknowledge the receipt, and to announce that the attack would proceed.

Accordingly, the bombardment began at daylight on the morning of the 28th of December, and continued steadily all day and next night. The various forces for landing passed away to the eastward in gunboats and boats to the landing-place appointed. The landing actually began "at 10 a.m. on the 28th, but, owing to shoal water, some of the gunboats carrying the men got on shore, which caused great delay; and Captain Key's Division was not ready to march towards the part of the city on which it had been decided to make the assault until nearly five o'clock."[1]

But in the meantime directions had been given to Colonel Lemon and the 1st and 3rd Divisions of the Naval Brigade to advance and take possession of a large temple in front of our position, and within 100 yards of the wall. These divisions were therefore well in advance of Captain Key's Division when it was ready to march. It moved at five o'clock "to endeavour to catch up the two other divisions of the Naval Brigade, which had started some time before, but darkness coming on we failed to join them, and lay down for the night on some very rough ground about a mile and a half from the walls of the city.[1] Desultory firing was kept up by the Chinese during the night; but although several shots came close over our position, and some fell among the men, no casualties occurred. At daylight we got under arms, and advanced towards the position which had been selected for the assault. We were exposed to the fire from the walls and two forts during the advance, but, the cover and nature of the ground being very favourable for us, no casualties occurred. We halted under cover of large buildings outside the walls."[2]

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[1] Notes kindly supplied to me by Admiral Lord Hood of Avalon.

These were the temple buildings, which the other divisions had occupied on the previous evening; they afforded cover from the fire of Gough's Fort, and also from that which continued to be maintained from the city walls.

"The artillery now opened fire from four 9-pounders on the top of the parapet, to clear away the Chinese troops assembled there. A large body of Chinese troops sallied out through a large gate in the walls, and endeavoured to outflank us; and a good deal of skirmishing took place. A heavy fire of musketry was also kept up from the walls upon us. Here Captain Bate and Mr. Thompson, midshipman, and five or six men, were killed, and I think about fifteen or twenty wounded. The fire from the parapet being kept down by the artillery, the scaling-ladder party ran forward into the ditch which surrounded the walls and planted the ladders, up which the assaulting party rushed. This was no easy work, as the walls at the place where the assault was delivered were more than thirty feet high. On gaining the top of the parapet, a rush was made along the walls towards a fort which was just inside the walls and commanded the whole city. The Chinese fled from the fort as we reached it, and we at once took possession. Here Lord Gilford[3] was badly wounded, and several men were killed and wounded. . . .

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[1] Key's ever-faithful coxswain, Cornish, had managed to make a fire, and brewed some cocoa for his captain, which he brought to him when the bivouac settled down. Everyone had not so faithful an attendant, and there was not cocoa for all. It was a sad disappointment to Cornish that on such grounds his captain would take naught at his hands.

[2] Lord Hood's Notes.

[3] Afterwards Admiral Earl Clanwilliam, G.C.B., K.C.M.G.

Captain Key's Division encamped on the heights and in the captured fort on the nights of the 29th and 30th."[1]

"Sir M. Seymour and General Straubenzie wished to make a reconnaissance, and a force consisting of the 2nd Division Naval Brigade, 400 marines and 100 French seamen, marched on the ramparts round the whole city, and spiked 150 guns, all of which were loaded and pointed in the direction of that part of the walls on which they evidently thought that the assault would have been made. The next day the 1st and 3rd Divisions of the Naval Brigade returned to their ships, and Captain Key received orders from Sir Michael Seymour to provide a party of 100 seamen to accompany a body of marines and French seamen in the endeavour to effect the capture of Yeh, the Viceroy, who was supposed to be concealed in one of the temples in the heart of the city. During the march the marines lost their way; Captain Key at once offered to take his party of 100 seamen to endeavour to effect the capture of Yeh. A Chinese gave information that he was concealed in the palace of the lieutenant-governor of the city, and after a great deal of trouble was induced to show us the way. We marched for more than half an hour through thousands of Chinese, who offered no offensive action. At last we arrived at the palace, the gates of which were chained and barricaded. We burst open the gates, marched through several courtyards and small temples, and at last reached a large room in which were seated several mandarins, one of whom came forward and informed our Chinese interpreter[1] that he was Yeh. Captain Key, however, rushed on through a door into a garden, from which a mandarin (who proved to be the veritable Yeh) was in the act of making his escape. He was captured and placed in an armchair under my charge.[2] Information was sent to Sir M.

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[1] Lord Hood's Notes. The *Times* correspondent, occupying a position from which everything could be seen, thus describes the morning's work:—"The ships that had been enfilading the eastern wall now ceased firing. It was the moment for the assault. In the neighbourhood of the east fort the three divisions formed, and the rush was made. For two hours nothing is visible but smoke, nothing heard but the rattle of musketry and loud cheering. What deeds are done amongst this broken ground—among these trees and brushwood, on the tops, and in the interstices of these grove-covered hillocks,—how far these forces spread over more than a mile of attack, what divisions are first, who fall and who survive, I must tell hereafter. At eight o'clock the wall is gained, and I see the bluejackets, English and French, racing along it northwards. Gough's Fort gives out its fire, let us hope without effect; but well served, its guns might sweep the wall. There is a check, and silence for half an hour. I can recognise the blue trousers of one of the divisions of the Naval Brigade. The leaders are probably teaching them how to take the five-storeyed pagoda on the north-eastern wall. Along the city wall, and protected by its battlements, they pass, I think unscathed, the fire of a gleaming white battery, newly built and full of guns, erected upon a ledge of rock upon which the wall and the five-storeyed pagoda here stand. If the assailants would only go to a proper distance, how the guns would riddle them. But, with a rush and a cheer, a detachment strikes from the cover of the wall which the guns do not command, and houses itself safely at the foot of the very rock which bears the battery. Not a shot can it fire. The riflemen from the walls now ply this half-moon for some minutes, and in a quarter of an hour the detachment at the foot of the rock has gone round and taken the position from behind. Relieved of these guns, which might have swept them down by hundreds, our men in serried masses are now swarming along the wall. The five-storeyed pagoda (which is no more a pagoda, according to our notion, than it is a bum-boat, but an old square red brick building divided into five storeys) is carried by the bayonet, and the French and English colours are hoisted simultaneously [by Captain Key's coxswain—Cornish]. Now Gough's Fort opens sulkily upon its late ally; but the assailants, not waiting to reply, hurry along the intervening wall, westward. I can follow them for some time from my position, and I hear them cheering when I lose them in the hollow. A few minutes of sharp fusillade, and bluejackets emerge from the trees and buildings upon Magazine Hill. A moment after and up go two bits of bunting, which tell us that the key of Canton is our own.

"It is now twenty minutes after ten. In four hours, therefore, the hill defences of this city have been captured. Gough's Fort yet holds out, but this is a mere question of a few hours, or minutes, more or less—the Magazine Hill commands it, and is within point-blank range."—*Times*, February 28th, 1858.

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[1] This was Consul (afterwards Sir Harry) Parkes, K.C.M.G.

[2] Captain Key's coxswain, Cornish, who had followed him from the *Amphion*, and was his faithful attendant for years afterwards, thus describes the occurrence: "Captain Key had the help of Consul Parkes. We caught one person. It appears Consul Parkes was mistaken. The man was the aide-de-camp, and Consul Parkes thought it was Governor Yeh. I had to collar him by Parkes's orders. I took him to the front, and put him under the guard of some of the bluejackets. We went into Governor Yeh's settlement. There were two horses in the yard, and there was everything ready to go away. Consul Parkes says, 'We have made a mistake; *that* is Governor Yeh'! Sir Cooper Key caught him round the neck and said, 'I presume you are Governor Yeh?' He resisted a little bit, but we was all round him like a flock of sheep, and he sank down in a chair. There was three bluejackets on each side of him, and a petty officer, and there was a man taking his photograph."

Seymour and General Straubenzie of the capture; and in the meantime a careful search was made in the palace, and boxes were found full of important papers with secret information from spies at Hong Kong relative to all our proceedings. No attempt at rescue was made by the Chinese. We subsequently made twelve Chinese carry Yeh in his sedan-chair right through the heart of Canton to the General's headquarters. He was subsequently sent as a prisoner on board the *Inflexible*, anchored off Tiger Island, in the Canton River. Some of his personal attendants were allowed to accompany him, and he was afterwards conveyed to Calcutta, where, some time afterwards, he died.

"Captain Key, the officers and men of the 2nd Division of the Naval Brigade, were subsequently quartered in a very large temple in the heart of Canton for nearly a month, after which, as everything was quiet, they returned to their ships."[1]

Captain Key's health at this time began to fail. Quite possibly, the reaction after the anxieties of the Indian Mutiny, the few days of moving incident and great activity involved in the capture of Canton, to be followed by the dead quiet of lying in Hong Kong harbour, aggravated the disease. On the 16th of April, Captain Key was invalided on board the *Nankin* for "climatic cachexia and derangement of the digestive organs," and was ordered a passage home, for the re-establishment of his health, in the P. & O. steamer, which sailed on the 23rd.

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[1] Lord Hood's Notes.

CHAPTER XIV

A ROYAL COMMISSIONER—CAPTAIN OF THE *DEVONPORT* STEAM ORDINARY—1859–1863

AT the time of Captain Key's return to England a strong feeling possessed the official mind of the defencelessness of some of our ports against French attack, especially of such ports as Portsmouth and Plymouth. It scarcely appears that any authority of the time had studied the proceedings of the Royal Commission of 1785, when the same sort of local alarm had spread, and which was only allayed by the common-sense of Sir John Jervis and the moiety of the Royal Commission that acted with him.

The theory of 1785 was that of 1859—namely, that the natural defenders of these ports, the only defenders which experience had shown to be effective, our warships, would all be conveniently absent when such attacks were in the wind. As in 1785, so in 1859, the alarm was cultivated in the highest quarters, and designs to spend considerable sums of money in erecting great protective works at Portsmouth, Plymouth, and other ports were fostered.

There is no record that Captain Key had made a special study of the great principles which should underlie all conceptions of this sort, but on his return to England he seems to have fallen into the company of those who were thoroughly impressed with these alarms, and he certainly adopted them in the fullest degree. In January 1859 he addressed a paper to the Admiralty, which is a monograph of the defenceless state of Portsmouth, containing most of those propositions which afterwards were embodied in the report of the subsequent Royal Commission, and which are now generally held to be fallacies.

In this paper he said—

> "The destruction of Portsmouth, at the outbreak of a war, might prove a blow of vital importance to this country. . . . England's natural and most efficient defence has ever been, and will ever be, in her fleet; but many causes may operate to withdraw that fleet from our shores, and any expedition of importance would probably be reinforced by every available vessel of war. It would seem imperative, therefore, to secure our naval arsenals from a sudden attack of ships by permanent defences either on land or afloat. . . . The defences of Portsmouth are at present totally insufficient to prevent a bombardment of the dockyard, in the absence of our fleet, by gunboats or mortar-boats armed with long-ranged guns, etc. These vessels might station themselves on the Horse Sand, and, without anchoring, might with tolerable certainty throw shell of any description into the dockyard, being then at about 6000 yards distance from it. . . . A detachment of the enemy's fleet might at the same time silence the guns bearing on Stokes Bay, and—the direction being indicated from the mast-head of one of the ships—they might shell the dockyard from that position.
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> "The attack now spoken of is, as before mentioned, only possible if the enemy is capable of maintaining the command of the Channel for a few days by a superior naval force. A small squadron of our ships would be of little avail at Spithead for its defence. They would be so entirely unsupported by land batteries that they must necessarily retire before a superior force."

These views, which are the roots of the subsequent report of the Royal Commission, surprise one who has had opportunities of observing the general keenness and clearness of Key's intellect. He appears to have narrowed his conceptions in a remarkable degree in this instance.

He had close personal knowledge of all the conditions which made the bombardment of Sveaborg possible, and he was well aware of the real impotence of that demonstration. But if he could have reasonably surmised like conditions available to the French in the problematical bombardment of Portsmouth, those very conditions made such bombardment the unlikeliest possible event of war. For, given this absence of naval defence, what was to hinder successful invasion? If it was open to the French to destroy Portsmouth Dockyard by bombardment, it was at least equally open to them to conquer the country by invasion. Was it possible to suppose the French choosing the minor and inconclusive operation when the major and conclusive operation was ready to their hand? The allies in the Baltic were restricted to the minor operation because of the strength of the Russian army. No such restriction existed upon French armies under the hypothesis put forward.

But had anyone at that date been competent to ask how it was possible to conceive of the Channel being left without sufficient naval defence—not owing to want of means, but owing to the transfer of the naval defence to some unknown quarter—at a time when France had accumulated such a bombarding material as would suffice to destroy Portsmouth Dockyard in "a few days," the whole position must have crumbled to pieces. Captain Key did not ask himself the question, and, having granted the fundamental postulate, he at once found himself in overwhelming difficulties—

> "It must be evident," he said, "that no half-measures can be of any service. If a position is to be defended, it must be made secure; no weak point should be overlooked by which an attack could have a reasonable probability of success."

And then he goes on to show that Portsmouth cannot be made secure unless the Isle of Wight is first made secure; and he submits the erection of a chain of towers at every point of the southern part of the island where a landing could be effected.

The author of the paper is naturally, indeed necessarily, led on to show that, after everything possible had been done to protect Portsmouth from an attack by sea, it would be all of no avail unless the defences by land were equally impregnable, and he sketches the necessity of fortifying Portsdown Hill and the country surrounding Portsmouth.

That a man of such real power, and of such remarkable width of view, should have produced a paper containing so much palpable fallacy, is a testimony to the strength of the idea dominant at the time. Captain Key must have mixed much with those who were then full of these fallacies. The weight of opinion by which he was surrounded hindered the independent action of his own mind, and led him to put forward ideas which wanted the solid basis of data before they could pass into physical being—

> "In conclusion," he says, "I have the honour to submit for their Lordships' consideration, that no plan less comprehensive than the one here proposed will

effectually protect Portsmouth in the event of our Channel Fleet being at any time inferior to that of our enemy and his allies."

It is needless to say that only part of the plan was ever put in force; it is also needless to say that if every tittle of the plan had been put in force it would still have been possible to declare that Portsmouth Dockyard was open to destruction, if the naval force available for its defence was inferior to that which might be brought to the attack.

Captain Key's mistake was the very common one of confusing force with the position of force. The superior force is secure because it is superior. The inferior force may be made less inferior by its position, but it is the inferior force still, and can never be secure. The inferior force on one side of an unfordable river may be perfectly secure from the attack of a superior force on the other side, but only until the superior force has thrown a bridge across. Wellington's position behind the lines of Torres Vedras was no more secure than was Todleben's behind the ramparts of Sevastopol. The lines served the purposes of delay, from which it followed that Wellington would grow stronger and Masséna weaker. But no one knew better than Wellington, that if Masséna could have grown stronger outside the lines while Wellington grew weaker inside them, the lines themselves could not possibly save him.

And so with the question of Portsmouth. The hypothesis makes its garrison the weaker, and the French forces the stronger. The place can never be secure so long as that is the case. To strengthen the position of the garrison may delay its fall. It may even postpone its attack. But if the attack is made, there can be no guarantee that it will not succeed, no matter what steps may be taken to strengthen the position of the inferior garrison.

It follows that superiority at sea, superiority which bars the road to Portsmouth from France, is the only possible guarantee against the attacks which Captain Key assumed. Such reasoning does not forbid the erection of a certain amount of fixed defences, but it absolutely forbids every idea of making a place impregnable to the power which has the command of the roads to it.

Men—especially naval men—who could hold the views embodied in this paper were exceedingly valuable to those in high places who were persuaded that local defence was, if not superior to general defence, at least a substitute for it. When, on the 20th of August 1859, a Royal Commission was issued "to consider the defences of the United Kingdom," Captain Key was appointed one of the Commissioners. On this Commission were four military men, two naval men, Rear-Admiral George Elliot[1] and Captain Key, and one civilian, Mr. Fergusson, who had made himself celebrated by the invention of a special system of fortification.

Captain Key's letter, as well as the questions put by the members of the Commission, show that they were specially chosen to put their imprimatur on foregone conclusions. The Government had determined on a great expenditure on local defences, especially at Portsmouth and Plymouth, rather than on strengthening the general—that is, the naval—defence. Therefore, although the general question appeared to be open to the Commission, special instructions narrowed the scope of the reference. The Commissioners were only desired to inquire "into the present state, condition, and sufficiency of the fortifications existing for the defence of our United Kingdom," and to have examination "into all works at present in progress for the improvement thereof"; and consideration was to be given "to the most effectual means of rendering the same complete, especially to all such works of defence as are intended for the protection of our royal arsenals and dockyards, in case of any hostile attack being made by foreign enemies both by sea and land." A memorandum by Mr. Sidney Herbert, the War Minister, still further put limits to the inquiry, by specifying the works to be examined as those at Portsmouth, Plymouth, Portland, Pembroke, Dover, Chatham, and the Medway. And it was intimated that all the works in progress, or which had been decided upon, should be treated as part of the general scheme of defence which the Commissioners might recommend.

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[1] Afterwards Admiral Sir George Elliot, K.C.B.

With Captain Key's letter to the Admiralty before us, we can see how entirely he was imbued with the prevailing ideas, by the nature of the questions he put to the witnesses. He very rarely goes beyond—no Commissioner often went beyond—the terms of the reference in questioning, although the signed report is entirely beyond them. Two principal exceptions stand thus—

> "Do you consider it advisable to leave the defence of Spithead and Portsmouth harbour to our ships, or would it be better to fortify it and keep our ships for service elsewhere?"[1]
>
> "An opinion is sometimes expressed that the defence of the ports and naval arsenals of Great Britain should be committed solely to the fleet; you will doubtless have considered the question. Will you inform the Commission what your opinion is, and the grounds on which you have formed it?"[2]

Obviously, there is a flaw in the reasoning behind the first question. Whether it might be judicious to guard Portsmouth against destructive attempts, which might be on too small a scale and too suddenly made to be interfered with by warships not immediately on the spot, would be, on any grounds, a legitimate question to put. Whether Portsmouth could be defended by something which was not naval force to such a degree that it might be entirely denuded of naval protection,—and if so, whether, apart from Portsmouth, that naval protection might be withdrawn,—are altogether different questions of the greatest depth and moment. Would it be possible, however well Portsmouth might be locally defended, to send the fleet somewhere else when such an attack was likely? Could the French be left in command of the waters surrounding these islands if every port in them had ten millions spent on their local defence?

Sir Thomas Maitland gave answers which only required following up to have placed the Royal Commission in a serious predicament. He said—

> "That is a point which requires consideration, whether the large sum of money which would be required to build these fortifications, floating batteries, etc., might not be more profitably laid out in building ships; because, if you can

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[1] *Q.* 53.—To Rear-Admiral Sir T. Maitland, C.B., afterwards Admiral Lord Lauderdale.

[2] *Q.* 323.—To Captain R. S. Hewlett, C.B., then captain of the *Excellent.*

ensure being masters of the Channel, I do not see any absolute necessity, as far as security goes, for fortifying Spithead, but the batteries being placed in the positions above alluded to would be a certain and permanent defence."

General Cameron followed the point for a moment, when he asked—

"Then you are an advocate for them?"

But Sir Thomas Maitland was by no means clear about it—

"It requires serious consideration," he said, "to say which I prefer; but with regard to my own opinion, I would first put the navy in such a position as to secure the command of the Channel, at least against any one nation."

Such answers could not be followed up, because they would have led the Commission away from the terms of its reference altogether. The ice was very thin there, and it was avoided.

Captain Hewlett's answer was more suitable to keep the inquiry out of dangerous waters—

"I would not leave it entirely to the defence of the fleet, because it might be absent. Many circumstances might arise to call it away. I think that heavy batteries should be placed to protect our arsenals, and I would leave the coast generally to the fleet."

This was a curious answer, because the natural rejoinders were—"How could the fleet protect 'the coast generally' if it could not protect the ports and arsenals along the coast? If the fleet is competent to protect the ports and arsenals as part of 'the coast generally,' what is the necessity for heavy batteries?"

Colonel Lefroy instinctively perceived the difficulty, and proceeded to assist the witness out of it—

"Is not the extent and the value of the commercial shipping which is always entering the Channel, and directing itself towards our great ports, such as to make it certain that we must detach powerful squadrons for its protection, to prevent its falling into the hands of the enemy?"

Captain Hewlett answered—

"There is no doubt of it; we must always have a large force protecting our commerce at the entrance of the Channel."

"And," pursued Colonel Lefroy, "it could not be at the dockyard, where you want it for defence?"

"No," replied Captain Hewlett; "unless you had a very large fleet, sufficient for both purposes. For instance, if a French Fleet came out and made its way out of the Channel, not knowing where it was going, you could not allow that fleet to scour the seas, and perhaps attack your colonies, without sending a fleet after it."

The astonishing position into which the Royal Commission had now got, and the absurd thesis it was endeavouring to sustain, does not seem to have been perceived by any member. But, in plain terms, it was this—(1) We must expect to have a fleet which might protect Portsmouth prevented from doing it by the necessity laid upon it of protecting commerce "at the entrance of the Channel," which commerce is to pass immediately into the hands of the French Fleet in command of the higher waters of the Channel; (2) When a French Fleet escapes to sea, and it is impossible to say where it has gone to, it is necessary to send the British Fleet away in some unknown direction, which may or may not be that taken by the French Fleet; (3) Although the French Fleet has disappeared at sea, it is ready to attack Portsmouth, which must therefore be fortified against it.

It must ever remain somewhat of a puzzle how such views as these were allowed by the Commissioners to maintain themselves for one moment. The strongest piece of evidence they had before them was that of Lord Overstone, which rapidly became celebrated all over the kingdom. This went to show most clearly that if there was the remotest possibility of an enemy being left in a position to bombard Portsmouth effectually, there must have been previous national collapse. This witness made it clear, that unless all territorial attack on these islands could be put absolutely out of the thought of France, British power was not worth a day's purchase. It was no use making such attacks difficult by any system of defences. If places could not be left locally open to attack, and yet impossible of attack because of the general naval defence, there was no use even discussing the question—

"If we prove," Lord Overstone had concluded, "too apathetic to take the necessary precautions, or make the necessary efforts; or too shortsighted and selfish to submit to the necessary sacrifice, we must bow to the fate which the whole world will declare that we have deserved."

With these tremendous warnings ringing in their ears, the Royal Commission sat down to pen the first paragraph of their report, as follows—

> "In taking into consideration the general question of the defence of the United Kingdom against foreign invasion, your Commissioners turned their attention in the first instance to the Channel, and to our naval resources as the means of retaining the command of it. This is the first and most obvious line of defence; but it is one which could not in our opinion be entirely relied upon at the present day, even if England had had no greater external interests to protect than the countries which may be opposed to her. Its adoption would involve the necessity of retaining in the Channel, for purely defensive purposes, a fleet equal to any which could be brought against it, not only by one European State, but by any probable combination of European Powers; and this in addition to the other fleets and armies which are required for the protection of our vast Colonial Empire, our military communication with distant dependencies, our extended commerce and interests in every quarter of the globe.
>
> "Even if it were possible that a fleet sufficient to meet the emergency of a sudden naval combination against this country could be kept available and fully manned in time of peace, such an application of the resources of the nation would lead to an outlay of the public revenue far exceeding the expenditure which would suffice for that object under other circumstances."

Although commissions, committees, and boards, assembled for constructive rather than for critical and amending work, sometimes say strange things, none perhaps ever laid down more strange propositions than these. They may be placed in the form of antitheses—

1. We cannot possibly expect to keep the command of the Channel in the next war; but there is a substitute for it.

2. We must certainly expect to be cut off from communication with our own shores by the fleets of our enemies; but that will not prevent us from keeping up communication between our own shores and our colonies,—we can keep "our military communications with distant dependencies" while they are cut at the base.

3. We cannot possibly guarantee free passage of our commerce up and down the Channel; but that does not matter, since we can protect it at more distant points.

4. It is perfectly true, as Lord Overstone has said, that even the more "serious apprehension of invasion" will bring about general collapse in the country; but collapse may be avoided by preparations for meeting invasion after it has come about.

5. It is true that collapse will come on the landing, "without reference to any ulterior operations";[1] but preparations to meet these will prevent the collapse.

6. It is true that "if we prove too apathetic to take the necessary precautions or make the requisite efforts, or too shortsighted and selfish to submit to the necessary sacrifice, we must bow to the fate which the world will declare that we deserve; but as it would cost a good deal not to bow to the fate, we had better bow to it.

Under what pressure of circumstances the Royal Commission undertook to make a case for justifying a predetermined and very large expenditure, which the only evidence before them showed to be practically useless, will perhaps never be known. There remains no record of how far Captain Key's opinions influenced his colleagues; but if he put forward in council the views he had expressed already to the Admiralty, his position and antecedents must have given them very great weight. Sir Thomas Maitland's evidence is enough to show that such views were not even then everywhere prevalent in the navy; but if they were held by Captain Key and Admiral Elliot independently, the military members would have been content, without further evidence, to embody them in the report, and their being held by distinguished naval officers would have been a reason for going beyond the terms of the reference in exhibiting them.

It is true, and made abundantly clear in contemporary documents, that the statesmen, the public, and even the navy of that day, were full to overflowing with fallacies as to our naval position. We might even go so far as to say that had Lord Overstone himself been cross-examined, he might have been found to suppose that the absolute command of the Channel was only a sort of alternative policy, to be adopted or discarded according to circumstances. But notwithstanding this incomprehensible attitude of the public mind, reasoning power, acuteness of perception, and breadth of view, such as Captain Key's were at this time, make it most surprising that he should have fallen in with it. The fact can only be explained by supposing he was called upon for a hasty opinion on the subject shortly after his return to England, and was led to express one before he had heard anything on the other side.

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[1] Lord Overstone.

The strangeness of the report was not confined to the paragraphs quoted. The Royal Commissioners having taken up a false scent, were carried more and more away from the true scent, and over a very rough country.

Though it could not guarantee a Channel fleet at all, the report held it of all things necessary that there should be huge fortifications on all sides of the naval ports for the Channel fleet to shelter in—of course, from the enemy who had command of the Channel, and was therefore free to invade.

"Since the application of steam to the propulsion of vessels, we could no longer rely upon being able to prevent the landing of a hostile force in the country." So says the report, without assigning any better reason than asserting that a small force might be thrown suddenly on some unprotected part of the coast—which was, of course, true enough—under cover of which an invading army might be landed, which was a complete *non sequitur*. How could a small force landed "cover" the landing of a great one? If it could so act, what had the fact got to do with the introduction of steam propulsion?

Then the Commissioners go on to say that "circumstances may no doubt arise to prevent the success of such an attempt; but your Commissioners submit that it would be unwise in the extreme to rely upon such a contingency; that to do so only tends to invite invasion, and to give rise to those recurring alarms which periodically, and not without grounds, take possession of the public mind." Such a paragraph could only properly precede a statement of the proposals which, if adopted, would make the success of invasion impossible. But nothing was further from the thought of the Commissioners. They said—

"Having carefully weighed the foregoing considerations, we are led to the opinion that neither our fleet, our standing army, nor our volunteer forces, nor even the three combined, can be relied on as sufficient in themselves for the security of the kingdom against foreign invasion. We therefore proceed to consider that part of our instructions which directs our attention especially to fortifications."

We have to recollect that the fortifications of the naval ports was not a "part," but the whole, of the matter before the Commissioners in the reference; further, we must remember that the Commissioners only apprehended invasion on "unprotected" parts of the coast,—of which they proposed to leave 750 miles open,—and that all the naval ports were already protected; thirdly, it is to be observed that Captain Key's fears for Portsmouth went no further than its destructive bombardment, and that therefore the further fortification of the naval ports could have had no connection at all with preventing invasion. Taking it altogether, therefore, the Royal Commissioners joined in a report which left invasion exactly where they found it, but impressed the country with its liability to invasion more distinctly than it had ever before been done officially. They entirely abstained from making any proposals to mitigate the dangers they pointed out, but advocated a large expenditure in a direction which, in spite of the evidence before them, they were obliged to admit was without justification.

Captain Key's position taken up in his letter to the Admiralty was logical, if mistaken; the report which he ultimately signed did not take up his position. It maintained his mistake, but abandoned his logic.

In later years it fell to Captain Key's lot to fight the battle of our naval position on the only grounds possible, namely, by denying the whole of the reasoning put forward both in his original letter and in the report which he had signed. Though no record of the fact remains amongst accessible papers, the singular and unique failure of his judgment in 1859–60 must have seriously hampered his position as First Sea Lord of the Admiralty under Lord Northbrook. I might even go further, and say that it was the want of a clear apprehension of the very basis of naval strategy, an apprehension which was present to his younger mind,[1] that left him open to the reproaches of some of his brother-officers in the closing years of his life. The Royal Commission reported in February 1860, and in the following June Captain Key was appointed to succeed Captain Robert Spencer Robinson[2] in the most congenial post of captain of the Steam Ordinary at Devonport.

Here, that delight in and mastery over questions relating to material, which we have seen springing up even during his childhood in the navy,—markedly showing itself in his action about the recovery of the *Gorgon*, and in his book on that feat; and cropping up now and then, even under the pressures of diplomacy in the *Bulldog*, and of active service against the enemy in the *Amphion*,—had full play.

The office of captain of the Steam Ordinary, or, as it came to be called while Captain Key held the office, the "Steam Reserve," was somewhat peculiar. The Steam Ordinary was, in its essence and general character, only a continuation of what had been going on time out of mind with the sailing ships of the navy.

From the days of James Duke of York, at least, there had been an "Ordinary" consisting of the ships of the navy, not in commission but in reserve; and there had always been officers and a regular staff in charge of it. In the days of pattern-following and simplicity, care-taking was the chief duty of the staff of the Ordinary; but as we began to accumulate steam ships which were out of commission, it was found that there was more than mere care-taking to be done to them. Presently the Steam Ordinary became separated from the Sailing Ordinary under the two differentiating terms, and we had the captain of the Steam Ordinary as well as the captain of the Sailing Ordinary at each port. But perhaps the appointment of the captain of the Steam Ordinary did not arise so much in view of separate care-taking and charge, as from other necessities.

Every sailing ship was either completely or nearly built and fitted to pattern. I have seen, in the older records, orders from the Navy Board to "their affectionate friend" the master shipwright at a dockyard to build "a fourth-rate," to be so long, so broad, and so deep, which dimensions he could only vary "at his peril." I have naturally looked for some further detail, supposing that the brief mandate was a little wanting, and that the threat did not quite supply the want. But the fourth-rate was built without further instruction. The possibility existed, because all was then done by rule and pattern; and rule and pattern were little disturbed till steam arose. But it was soon found that every steamer was a new experiment, offering endless matters for discussion and settlement before she was complete. Who was to take the side of the active navy in the discussion at the port where the ship was to be built and fitted? There was no one. And so a captain of the Steam Ordinary was appointed, whose primary duty was to watch construction and material of all kinds as new designs of steam ships were put forward. He was responsible to the active navy that what passed through his hands was of the right sort and in the proper place; and he necessarily had a voice in arranging every part of the ship, except the original designs for hull, engines, and armament. But even here he had a power of effecting changes, where change was possible after progress towards completion had been made.

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[1] Reference is made to the concluding paragraph of the tenth chapter.

[2] Afterwards Admiral Sir R. S. Robinson, K.C.B., and Controller of the Navy.

The secondary duty of the captain of the Steam Ordinary became the care of the steam ships; such duty being exactly parallel with that of the captain of the Sailing Ordinary, who was Captain Woodford J. Williams at the time Captain Key took up his appointment. The third duty of the captain of the Steam Ordinary was the command and discipline of the staff attached to him for carrying out his business, which included considerable numbers of men and officers, with all the engineer officers especially, attached to ships in the Steam Ordinary for the care of the machinery. Where every ship under his care was an experiment, it followed that much that it was proposed to apply to them needed experimental trial before it was applied; and, apart from any wishes that the captain of the Steam Ordinary might have on this head, the Admiralty soon became accustomed to refer every question in material, which was not wholly related either to ordnance, to clothing, or to victualling, and which required experimental treatment, to the captain of the Steam Ordinary. And, indeed, there were very few questions of material as to which the captain of the Steam Ordinary did not find himself, in some sort, an arbitrator between dockyard authorities, ordnance authorities, the Admiralty, and the active service.

The captain of the Steam Ordinary reported to the Admiral Superintendent on all questions of material, and to the Commander-in-Chief on all questions of personnel. He was really in a most independent position, and, according to his view of his duties, he might make himself an automatic recorder of the views of the strongest side, or he might impress his personality on every branch of the naval service.

Captain Key settled down with his wife and family in the pretty little house of Carbele, near Torpoint, immediately opposite the dockyard. It was to all intents and purposes a little country house. He went across the water in his gig to his work in the morning, visiting his own office at Keyham early enough to master the morning's intelligence, and then to attend the "reading" in the boardroom of the Admiral Superintendent's office at Devonport Dockyard at half-past nine.

My subordinate duties also called me there at the same time, and I was soon delighted and honoured by the intimacy of the new captain of the Steam Ordinary, which lasted as a close friendship till the hour of his death.

Captain Key was the last man in the world to be an automaton in any matter on which he might be engaged. He at once realised his position as a principal guide of the material progress of the navy, and threw all his force and energy, backed by the splendid allies of an open mind and a genial temper that nothing could ruffle, into his task. As I knew him at this time, he seemed positively to revel in his work. He was always full of it; always turning over this point and that point; discussing with anyone and everyone who was capable of dealing with the arguments pro and con, the prospects of such and such a proposed advance, the dangers of such and such a possibly backward step.

In going over his public letter-book at this time, I am struck by the enormous number of points that he carried, and his great influence on material progress; while there does not occur one single word which indicates irritation or impatience. Yet he often had justifiable occasion for both. It is scarcely possible for one who has had to do with this kind of business not to admire the way Captain Key carried his points and did his work. Nor can it be doubted that the personal character of the captain of the Steam Ordinary had to do with his success over material, quite as much as the reason of the thing itself, for he was not—as we might infer—always right.

The increasing length of steamships; the cumbering of the decks with immense engine-room hatches, with funnels and their casings; the necessarily increasing weight of anchors and cables, was throwing all the orthodox arrangements for weighing the anchors out of gear. It may be explained that in the time of Sir Walter Raleigh the now familiar *capstan* had been devised. The plan was to place the capstan well aft in the ship, and to arrange that not very far before it was the hatchway, or opening, down which the great and unwieldy hemp cable was to be "payed down" for coiling away in the "tiers." Then round the capstan were placed two or three turns of the hemp "messenger," a stout cable, but less stout than the ship's cable. One end of the messenger was taken forward and passed—or "rove"—through two immense pulleys called voyal, vowel, or viol blocks, right forward, in the "eyes" of the ship. This end, which had a loop in it, having been passed along the deck forward on one side, through the block on that side, across through the other block, was then brought aft along the other side of the deck, and its loop or "eye" was lashed to a similar loop or eye which was found in the other end of the messenger. Thus was formed an endless rope running along the deck, and pretty well all round it.

When in place, it lay touching, from the hawse-hole (the pipe through which it passed outside the ship to the anchor), the cable of the anchor that was to be weighed. The manner of weighing was to pass short lengths of soft rope, called "nippers," spirally round and round both cable and messenger, and so as to grip both tightly. It followed that as the men walked round and round at the capstan bars, the endless messenger dragged in the cable with it. Men walked slowly aft as the cable came in, holding the ends of the nippers tightly, and only unwinding them when they reached the hatch, down which the incoming cable passed below. Fresh and fresh nippers were wound round cable and messenger in the forepart of the ship, so that there was always a great length of cable tightly bound to and travelling aft with the messenger. In the days of hemp cables, this was the dirtiest and most offensive part of a ship's life. The cable brought up mud on it, greasy slippery mud, falling on the decks in splotches of filth, hardly to be cleared off the cable by the rough washing which time alone allowed, and swarming with animalculæ which died and tainted the air of the ship with the stench of putrefaction. But not alone was this the inconvenience of mud. When the heave was heavy, and the mud greasy, the cable "rendered" through the nippers, and the capstan went round without producing any effect. Whatever the inconveniences, this system of Sir Walter Raleigh's time held its own not only till hemp was superseded by iron as the material of cables, but long after it. A chain messenger, actuated by a "sprocket wheel," or series of spikes sticking out radially round the base of the capstan to fit into the links, took the place of the hemp messenger; and the old soft hemp nippers, with their three hundred years of ancestry behind them, still bound the two chains together as they had done the two ropes in Raleigh's day.

Our ancestors had submitted to the inconvenience of the method because there was no alternative. There had been an alternative actually in use in the navy for at least fourteen years. But Captain Key found the antiquity, not flourishing—for that was impossible—but dragging out a miserable senility in a new corvette then fitting, called the *Jason*; and, just a month and three days after taking up his appointment, he fell upon its useless old life and choked it out.

The attempt to put new wine into old bottles placed the capstan 153 feet from the bow of the ship, and entailed dragging a chain messenger 312 feet long, and presumably weighing tons, over a track diverted and hindered by funnel casings and pumps, resulting in all sorts of inconveniences, the least being the loss of power in the men to weigh the anchor.

The remedy was the putting of an anchor capstan in a suitable place forward, and bringing the cable direct to it. Captain Key had first seen it in the French ship the *Jena*.[1] It was fourteen or fifteen years old as the invention of Messrs. Brown & Harfield, of which Captain Key—probably in the *Amphion* and *Sans Pareil*—had had five years' experience. "It was needless," said the new and energetic captain of the Steam Ordinary, "to point out the advantages of this plan, such as the saving of expense, and economy of men and labour."

Messrs. Brown & Harfield had, in fact, observed that if a chain messenger could be gripped and held by the capstan in passing round it, so also could a chain cable. Captain Key pressed the simple truth home, but he was not without subsequent combats with the error. Even though he won in the *Jason*, the friends of letting-things-be managed to complete the fitting by leaving out its main features, which he had to represent four months later. At the same time, he made good his ground by claiming that the well-tried arrangement should be adopted in the new line-of-battle ship *Gibraltar*, and in the new frigate *Liverpool*. His action appears to have determined the ultimate course of things. Chain messengers, and all belonging to them, have for years disappeared; and whatever the form of purchase adopted, the chain cable is now brought direct to the capstan or windlass, the most common as well as the most effective arrangements still bearing the name—Harfield—of one of the original projectors.

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[1] See p. 141.

A few days after his declaration against the obsolete "messenger" system of weighing the anchor, we find him striking against a numerous group of small gunnery fittings common to every ship in the service, each of them obsolete, each of them of no account, but costing in the aggregate great sums of money and employing much labour uselessly. No one can ever estimate the waste that goes on in this way in the navy from the continued supply and fitting of things which are only concomitants of things superseded. It is always difficult to see at first how many things in a ship some novel fitting will render obsolete. If no one takes pains to do it, obsolete and perfectly useless fittings will continue for decades and scores of years, until at last they can retain their places in security because no one can prove the negative—everyone having forgotten their origin—that they might *not* be of some use.

Captain Key was ever on the watch for this kind of thing. Now it was the useless supply of "range tables" at the guns superseded by marking the "tangent sight" in yards, instead of as formerly in degrees. Now it was very ancient instruments, called "side scales," superseded by marking the "beds and coins" of guns. Now it was showing how the authorities were going on supplying a double set of spare masts and yards of exactly the same size, to ships whose fore and whose main masts and yards had been made identical, just in order that one set of spare masts and yards might be sufficient.

In the matter of reducing the unnecessary supply of spare stores, in order to reduce weight, save expense, and gain space, so much valued on board ship, Captain Key was always active. He had notable opportunities, of which he fully availed himself, in the matter of the screw-propeller.

At this time the paddle-wheel was quite obsolete for warships. It had belied Commander Key's earlier prognostications when his pride in his *Bulldog* coloured his thought, and had disappeared. But as the warship, to be perfect, must be as good a sailing ship of the old school as she was a steamer of the new school, it was necessary that when the steamer had to sail, the instrument of propulsion, the screw-propeller, should be lifted out of the water, so as not to impede her progress. As it could be so lifted, it could, of course, be replaced on board the ship in case of its being broken accidentally. Screws were at first cast solid, and therefore, for good or evil, the "pitch"—that is, the angle at which the blades were set—was fixed in the casting. The difficulty was that the proper pitch for a screw in any ship was matter for experiment,—such experiment as the captain of the Steam Ordinary at Devonport was constantly engaged in carrying out,—and it was a serious matter to cast a fresh screw for every experiment.[1] Inventors, on these grounds, bethought them of constructing screw-propellers with movable blades, so that the pitch could be altered to any required angle. A Mr. Griffiths was, in Captain Key's time, making great progress not only in this way, but in very much altering for the better the forms of the blades themselves.

Captain Key began to seize upon the points within a few weeks after he took up his office. As the theory was that a damaged screw could be hoisted out of the water and replaced by an undamaged one, the supply of a complete spare screw-propeller became a fixed arrangement of the ship's fittings. The complete spare propeller was necessarily very heavy, and occupied a great deal of space. But if blades were to become movable, it was reasonable to suppose that the replacing a damaged blade might be substituted for replacing the complete screw.

The *Jason* again became Captain Key's exemplar for the whole service. As she was to have a Griffiths propeller, it ought to follow, as a matter of course, that she might be supplied with a spare blade only, instead of a spare screw. Captain Key followed up the idea. As, said he, we are going to gain weight and space by getting rid of a superfluity, let us take full advantage of it. The *Jason*, if proper arrangements are made, can carry 16 tons more coal in place of the spare screw removed. Accordingly, the ship went to sea with only a spare blade, but with 286 tons, instead of 270 tons, in her bunkers. The example was constantly put forward, and no doubt, in a great degree owing to the activity and clear insight of the captain of the Steam Ordinary at Devonport, screws with shifting blades became common; the spare blade everywhere superseded the spare screw, and the space and weight gained were utilised in other ways.

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[1] He had recommended alteration in the pitch of the *Amphion's* screw. See p. 225.

In a week or two Captain Key is found noticing the wear and tear and decay of the exposed upper decks of ships in reserve, from the action of rain and sun. He submits the value of preservative paint or varnish, and his suggestion becomes the rule in the Ordinary.

As the theory was that the screw-propeller in a sailing steamer was to be continually in the water and out of the water, the methods of raising and lowering it engaged much attention, and exercised the talents of many inventors. One of these made a model of a plan supposed to be an improvement on what existed, and it was sent to the captain of the Steam Ordinary for report. As is not uncommon in these things, either the inventor, or some agent for him, considered the improvement self-evident, and sent no account of it. Captain Key, a little shortly, requires, amongst other things, to be told "on what points the model claims a superiority over that now in use"? It turned out only to be intended for use in frigates and corvettes. Captain Key studied it carefully from this point of view, analysed the claims to improvement point by point, and condemned it. Yet still, in the careful way he had of recognising the uncertainty of opinion and the certainty of experiment, he would not let his words prevent some confirmatory trial, and he recommended that that should be made on a sufficient scale. Probably it was never made. Men in office, driven to the wall with current business, are not seldom rejoiced at an excuse for inaction. All have not that eagerness to get at the bottom truth of things, small and great, which was one of Cooper Key's strongest characteristics.

But this whole question of raising and lowering the screw-propeller was now stirring in the mind of the captain of the Steam Ordinary. He began to slowly tear it up by the roots. This new model had made a great point of facilitating the shifting of the screw; a great point, that is, of the basis on which spare screws were supplied. Was it necessary, Captain Key asked himself, to go much out of the way on behalf of preparation for remedying the defect of a damaged screw? Was the screw, in fact, often damaged? It was not. We were, in fact, submitting to many serious inconveniences which were partly due to a false belief. "The operation," wrote Captain Key, "of *shifting a screw* is of so rare occurrence that it does not appear advisable to take into consideration the arrangements for doing so by the same means that are adopted for raising the screw out of the water." This was, as it were, a sort of first breach with existing opinion as to lifting the screws of warships. He worked at it till it was destroyed.

The apparatus arranged for lifting screws out of the water, when it was intended to convert the steamer into the sailing vessel, was that a great square tube was cut from the upper-deck of the ship down to the water, immediately over the place where the screw was to work; that is, immediately between the foremost and after stern-posts, the latter being that to which the rudder was attached. In the after-part of the foremost stern-post, and the fore-part of the after stern-post, metal guides were fixed, and between these guides a metal frame containing the screw, which was placed in bearings ready to revolve, was lowered into its fixed position. On the end of the screw-shaft a metal disc, called a cheese-coupling, was fixed, and diametrically across this disc a deep and wide slot was cut, like the slot in the head of an ordinary wood screw, and the shaft being turned so that the slot was perpendicular, a corresponding feather or flange on the after-part of the axis of the screw in the frame, fitted when the screw was lowered. Thus, in hoisting the screw out of the water, it was a mere question of turning the engine shaft so as to place the screw upright, then reeving a purchase through pulleys in the screw-frame (called the "banjo"), and in a suitable erection on the deck, and applying the muscular power of the ship's company to the work. In lowering the screw, the process was reversed.

In theory all this was quite a simple matter, and doubtless the arrangement was as perfect as it could be made. But in practice endless troubles were connected with it. Those who knew them were constantly making or suggesting improvements, and over and over again Captain Key was engaged in this way, and in seeing his plans adopted one after the other. Now it was a simplification of the erection necessary to be made on the upper-deck to carry the upper block of the purchase; now it was showing how needless it was to prepare to do more than to hoist the lower blade of the screw when sailing just out of the water, instead of several feet out of water as ordered, to the useless increase of expense, weight, and inconvenience; now it was showing how the general adoption of the form of screw-blade recommended by Mr. Griffiths would permit all "screw-wells," as the trunks were called, to be reduced in size, so as to mitigate a certain grave defect against which he fought steadily the whole time he commanded the Steam Reserve.

But all the time, it appears, he was growing to one general conclusion, which he put boldly forward and carried towards the close of 1861. Practically, it may be said that every proposal he put forward with regard to material was approved by the authorities, and ordered to be adopted, though often with modifications. It was very possible that one secret of his success was that he seldom spoke till he had made the matter ripe by a succession of smaller suggestions leading up to his main position. That now was, that the whole practice and system of raising screws was a mistake; and he took the opportunity of the coming rise of the ironclad, to nail the false coin to the counter.

In September 1861 he submitted the whole case, recommending that the idea of lifting the screws of ironclad ships should be wholly given up. He represented the inconveniences to which ships were subjected by the idea that it was necessary to lift the screws out of the water, and the subordinate, but really consequent, idea that screws were so liable to injury that ships must be prepared to substitute at least undamaged blades for those which were damaged. The screw-well weakened the after-part of the ship, necessitating heavy additional fittings, fastenings, "banjo-frames" (weighing 5¼ tons in cases), necessitating a fuller after-body for their support—the one thing which should be avoided if speed was to be increased. The screw-well complicated the mode of steering, generally involving such a short yoke or tiller as to lead to much inconvenience and difficulty. It impeded the effective armament of the stern.

These being glaring inconveniences, what advantages were claimed to justify their continuance?

The screw-well enabled the screw to be raised when the ship was under sail alone. If a screw-blade was broken, it enabled the spare blade to be substituted. If the screw was "fouled" by any means,—that is, entangled by heavy ropes or chains, etc.,—it allowed of its being cleared.

Captain Key, careful as usual to go only so far as he thought he could then carry his point, said that the first advantage claimed was not of importance for ironclad ships, presumably intended for home service. In any case, the reduction of speed under sail was much lessened by the diminution of the size of the blade (which was Griffiths' discovery). The *Renown* line-of-battle ship had lately made a voyage under sail with her screw down the whole time; it proved but little impediment; yet her propeller was the large-bladed Admiralty screw. An ironclad would be less inconvenienced, and might always use coal enough to turn the screw. The second advantage claimed was also of small importance. Experience had shown how rarely screws were injured; and if they were made a little stronger, injuries would be still rarer. In any case, ships on home service are within reach of a dock in case of accident. The third advantage claimed was doubtful. It was highly probable that a screw fouled by a hawser or chain could not be raised. If diving apparatuses were supplied, they would be much more to the purpose.

Weighing advantages and disadvantages, Captain Key could not avoid the conclusion that the latter preponderated. He had been led, he said, to consider this subject from knowing that in the French navy lifting screws had been entirely discontinued for two years; but he then only suggested it for British ships intended for home service. The ships of the French navy obtained a speed equal to that of ours with less power, for their engines were worked up to only double their normal power, whereas ours would generally achieve four times that amount. This result was due to the fineness they gave to the after-body, and this induced them to give up the screw-well.

Captain Key was scarcely just to himself in declaring that his mind followed French example. As a fact, he began to consider these points before he had been many weeks at Devonport. The French example only confirmed his views originally arrived at.

In three weeks from the date of this letter the Admiralty had given orders to abolish the lifting-screw in all ironclads building; and as Captain Key's letter covered the whole ground, the doom of the lifting-screw was sealed, to the great advantage of the navy.

A curious illustration of defective official method is disclosed by a discovery of Captain Key's regarding the apparatus supplied to ships for firing Congreve rockets. In those days these rockets were in much higher estimation than they now are, and it would have seemed that when it was ascertained that the apparatus for firing them was so arranged as to derange the aim and mislead the firer in every case, not a moment would be lost in calling in all the defective apparatuses and correcting them. But the matter was one for the Ordnance Department of the army, and a different view prevailed.

Captain Key found that the degrees for giving elevation to the rocket tube, according to the range required, were marked with gross irregularity; and that, as no radius was given, it was impossible to re-mark them, or to know what they were intended to mean. Nothing whatever came of the representation of this grave defect, and Captain Key wrote to say so in the middle of February 1861. In reply, he was informed that trials were now being made in H.M.S. *Excellent*, and that his letters had been forwarded to the

War Office. There was now a pause until the middle of March 1862, when the captain of the Steam Reserve reported that even the new supplies of rocket apparatus had not been touched, and contained all the mischiefs he had pointed out fifteen months before. The reply was simply that no attempt had been made to correct the defect, because no rocket tubes had been issued from the arsenal since the correct arrangement was approved.

The locomotion of the warship is, of course, her principal element. It consists of two parts—propulsion and manœuvring power. We have seen how Captain Key dealt with that part of propulsion power which was under his immediate control—the screw-propeller. The manœuvring power was, under the conditions of the day, in a far more defective state, and presented a far more complex and difficult problem. Captain Key began to attack it when he had been three months in office, and he never ceased to work at it as long as he held office. He was, in fact, at the time the one man who understood the fundamental importance of excessive steering power in a warship.[1] All the rest of the naval world of the day was content with the good the gods—that is, the routine ideas of the dockyard draughtsman—gave it, and rested content in admitting that the helm, which answered very well under sail, or under very low speed under steam, should be hopelessly ineffective under high steam.

The physical difficulties of the problem were bad enough; the mental or subjective difficulties were far worse, and it may even be said that they have not wholly disappeared even now.[2]

The rudder, tiller, wheel-ropes, and steering-wheel found in the paddle-wheel steam ship were practically those of the time of Nelson, and long before him. The rudder was wider, and, by making the axis of the rudder-head correspond with that of the pintles which worked in the gudgeons fixed to the stern-post, the rudder-head passed

[1] About this time he wrote the chapter on "Rudders and Steering" in Boyd's *Naval Cadets' Manual.*

[2] 1893.

up into the ship through a water-tight bearing; but this was the sole difference, unless the substitution of hide and leather wheel-ropes for hemp was a novelty in Nelson's day. But the paddle-wheel steamer was short and broad, like the old pattern sailing vessel, and her speed was so low generally, that probably defective steering power was never before Key in the *Gorgon* or the *Bulldog*. He might have had hints of the difficulties before him in the *Amphion* and *Sans Pareil*, but their low maximum speed would have hindered their pressing on him.

Now they were patent to a mind which reflected and looked forward. The screw-well forbade the use of the old tiller. It was necessary to substitute a cross piece, or yoke, on the rudder-head, and the "run" of the ship—the narrowing in of the sides towards the rudder-head—only allowed of a very short yoke. Here was a loss of power which could only be made up by increasing the purchase in the wheel-ropes, or by giving more turns to the wheel for any given helm angle. In the former case, friction carried away half the advantage; by the latter hung a tale. The mental or subjective difficulties were bound up in it, and could not clear themselves.

When ships were short and slow of speed, as propelled by sail, four men at the wheel could put the helm of the largest ship over to 35° or 40° at the highest speed such a vessel was likely to attain, with great quickness, and by revolving the steering-wheel no more than three times. The measure of the power gained was evidently the length of the arc described by the hindmost edge of the rudder, compared with the length of the space described by any single "spoke" of the wheel in three revolutions. The diameter of the circle described by this single "spoke" was fixed, being determined by the average height of the man who stood beside it. The rudders of sailing ships were narrow, and consequently the difference between the motion of the after-edge of the rudder in moving over 35° or 40°, and that of the motion of a single "spoke" of the wheel going round three times, was considerable. Partly influenced by a reasonable idea that if the attachments of the rudder were made elastic, a sea striking it would be less likely to "wring" the rudder-head,—an accident not of uncommon occurrence,—but more influenced by the heritage descending from the ancient seamen, the belief that everything in a ship ought to be loose and yielding, as the sea was itself loose and yielding, had introduced the wheel-ropes made of hide instead of hemp, and capable of almost infinite stretching. So long, therefore, as the pressure on the rudder was small,—rudders being narrow and speed low,—hide wheel-ropes gave whatever advantage could be reasonably expected, without much disadvantage. But when rudders broadened and speed increased, the muscular power of the men at the wheel was employed in stretching the wheel-ropes, and not in putting the helm over beyond a certain small angle.

Still, short "yokes" or tillers and stretching wheel-ropes presented no difficulties whatever, could the elementary principles of mechanics have been recognised. But they could not be, because of tradition. Every improver of steering powers in warships was called upon to do that which it was impossible to do, namely, to assist the muscular power of two, four, or perhaps six men at the wheel, without either increasing the diameter of the wheel itself or increasing the number of turns of the wheel required to put the helm over to a given angle. As straws blown by the wind of human error, the treatment of these elementary mechanical questions give a measure of its capacity. For years the ingenuity of naval officers and naval architects was hard at work endeavouring to give greater power to a lever of given length without shifting the fulcrum,—working, by means of yokes and purchases, to increase power between a rudder at a given angle and a wheel of given diameter revolving a given number of times.[1]

[1] I found the error in full force on board a new man-of-war in the eighties. An additional steering-wheel for use in action had to be fitted by means of an endless screw, shafting, and gearing. When the arrangement was completed, it was found that the men at the wheel had little power over the rudder. On tracing out the cause, it was found the multiplying gear put on near the rudder in order to give power, was taken off again near the wheel in order that it might not be necessary to revolve it more than three and a half times.

These were the conditions which Captain Key began to meet in his first report on steering appliances, dated 13th September 1860—

"Much attention," he said, "has been paid of late to effect an improvement in the steering gear of our large ships, and I beg to submit the following observations on this subject:—

"The yoke at present in use appears to have three defects:—

"1. Insufficient power to move the rudder when the screw is propelling the ship at full speed.

"2. A difficulty in shipping and unshipping it, if disabled by shot.

"3. Much inconvenience in setting up the wheel-ropes at sea, owing to the position of the standing part and the confined space abaft the yoke.

"Various remedies for the first defect have been proposed, nearly all of which are modifications of the same principle, introducing a tiller and rods or chains arranged in different ways for transmitting the power from the wheel to the rudder.

"It has, however, been considered necessary (whatever the mechanical arrangement may be) that the number of turns of the wheel required to move the rudder to its extreme position shall not be altered.

"If, therefore, it has been found that more turns are required, owing to the introduction of a long tiller or otherwise, other modifications have been made, such as increase in the barrel of the wheel, or reduction in number of parts of the wheel-ropes, until the established number of revolutions is produced.

"Now, I submit that it may be assumed as an axiom, that as long as the number of turns of the wheel remains the same for a certain motion of the rudder, the power applied to the rudder remains unaltered, whatever may be the arrangement or combination of rods, joints, or ropes. I mean by this, that increased purchase cannot be obtained without an increase in the number of turns of the wheel in putting the helm hard over.

"The motion of the spokes of the wheel for a given motion of the yoke is an accurate measure of the force applied to the extremity of the yoke. For instance, if the wheel be 6 ft. in diameter, and one arm of the yoke 6 ft. in length; then, if it requires three turns of the wheel to put the rudder over 32°, each spoke of the wheel has to move through 56.5 ft., by which the end of the yoke is moved 3.2 ft. The power, therefore, of this combination is 17.6 to 1, without any reference whatever to the intervening arrangement, except as regards friction.

"I wish by this to show that no advantage is gained by transmitting the movement of the wheel through a tiller to the yoke, unless the wheel is allowed to take more turns for a given movement of the rudder, and much disadvantage arises from the multiplication of parts to be struck by shot, and greater liability to disarrangement.[1]

"The remedies I would propose for the defects mentioned above are as follows:—

"1. If an increase of purchase is required in steam ships of large power, I would reeve the wheel-rope through the spare sheeve in the yoke, securing the standing part to the ship's stern, and thus allow the wheel to take an additional half-turn when the helm is put hard-over. Any purchase can be gained in this manner without any additional gear, and a broken wheel-rope is readily replaced.

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[1] Captain Key was alluding to a plan, then highly thought of, and being fitted; where there was a cross "yoke" on the real rudder-head actuated by rods passing on each side of the screw-well, and connected with a false rudder-head and tiller worked by wheel-ropes.

"The objections to this are: 1st, That the friction is increased; but this must be the case with any additional purchase. 2nd, That when under canvas, or easy steam, the motion of the rudder would be very slow. To obviate this, I would propose to come up the standing part and hitch or seize it to the next part close to the yoke,[1] which would restore it to the present purchase.

"2. To make the yoke more manageable for shifting or shipping it, I would propose that it should be made in two separate arms, each clasping the rudder-head, or being connected in any way thought desirable; a spare arm might be easily replaced.

"3. I would also suggest that the standing part of the wheel-rope, when rove through the spare sheeve in the yoke, should pass round a sheeve in the stern, and then be set up on the quarter with a lanyard or otherwise. A pull of the wheel-ropes might then be got at any time without difficulty, and without interfering with the steerage. It seems probable that many a rudder-head has been sprung[2] and yoke broke by slack wheel-ropes."

The above is quoted in full, because of its disclosure of how great mechanical errors may continue unrecognised, and because it is so characteristic of Captain Key's method.

The really gross and glaring error in elementary mechanics to which he draws attention was all round him. It was being perpetuated in every large ship. He puts forward its grossness in the plainest language, but he does not suffer a word of condemnation to escape him, and he does not even insist on its entire removal then and there.

Why not? Simply because he knew the error to be too firmly entrenched to be carried by assault, and he proceeded by the method of sap. He worked to get three and a half turns instead of three turns of the wheel admitted as a rule, so that when this point was gained he might be able to get rid of the tradition, and have the whole question regarded with an open mind.

Accordingly, we find him, after a lapse of several months, recommending, on the 20th September 1861, that all ships over 400 horse-power should be allowed four turns of the wheel to put the helm hard-over. Later, on the 8th

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[1] A highly technical form of expression, meaning to unfasten that end of the wheel-rope which was fastened to the ship's side, and to fasten it instead to the end of the yoke; thus using one pulley less than before.

[2] That is, strained by twisting or wringing.

February 1862, he asks that a comparative test of hemp and hide wheel-ropes should be made, as he believes from his own tests that the hide ropes have only half the strength of the hemp. He says nothing of what must have been foremost in his mind, namely, the fallacy which existed in having selected wheel-ropes, not for their strength, but for their elasticity, the quality which increased the difficulty of putting the helm over to high angles. His instinct forbade him to raise a point which would have called tradition into action against him, so he worked to displace hide wheel-ropes by a side wind.

But he was all the time mentally considering and discussing with others the possibility of adopting a form of rudder which might remove all the difficulties of steering, might enable rudders of any size to be put over to any desired angle, at any speed of the ship, without requiring more power to be employed than was necessary to overcome the friction of the moving parts. This was the now well-known "balanced rudder," a rudder, that is, which, instead of having the whole of its surface on the after-side of the axis, has just enough surface on the fore-side to balance the pressure of the water on the after-side, and to leave the rudder so that at any angle it shall have no inclination to move from the angle at which it is set. The idea was entirely original to his own mind, and it was, of course, a disappointment to him to discover, when he had brought the matter to maturity, that the balanced rudder was a forgotten and not a new invention.

He reported on his proposal, and sent drawings of the rudder to the Admiralty on the 6th of December 1862. He was at once authorised to carry out his proposed experiments in the gunboat *Delight*, and these were completely reported on in his letter of the 12th February 1863.

These were the first systematic trials of manœuvring powers ever made in England. They not only established the balanced rudder in the navy, but they gave rise to the practice of systematically measuring the spaces, as well as the times, required by H.M. ships to turn in—a matter which has shown itself ever since to be of the gravest importance.

The report showed that, while in no case could one of Her Majesty's large ships put her helm over to more than 25° at full speed, there were some which could not put it over to more than 11° under like conditions. The balanced rudder, it was proved, was not affected by speed, and could be put over to any angle with no more force than was required to move it in still water. Further, it was shown that every degree of helm that could be given, up to 45°, was of advantage to the turning powers of the ship, while there was no difference in the power of the common and balanced rudder, area for area, and angle and angle.

The balanced rudder was immediately introduced into the navy, and it is somewhat singular to note that when the *Bellerophon* was shown to have what were then remarkable turning powers, very little of the advantage was laid at the door of Key's balanced rudder, and the unusually high helm angle that could be given to it; and it was usual to attribute everything to the decreased length of the ship in comparison with her tonnage. When the case is examined, it can be seen that the greater part of the improvement was due to the rudder, and the lesser part to the length of the ship. The error in too much overlooking the effect of Key's invention unquestionably retarded the progress of naval architecture for a time.

While Key's active mind and clear well-balanced intellect was thus touching, for its good, every part of naval material, there were not wanting opportunities of his impressing himself on the larger questions of personnel, which, like everything else in the navy, were showing signs of restless movement.

In the early part of 1862 dissatisfaction had long been rife amongst the separate class of navigating officers, —masters, second masters, and masters' assistants—the direct descendants of a time when the sailoring and fighting elements in a warship were held to be distinct, and when the fighting captain brought his fighting place-holder or lieutenant with him, who knew no more than he did of seamanship and navigation. Nothing of handling the spars and sails of a ship was now left to the master. The dignified captain no longer "directed his master to place him alongside" a certain ship of the enemy's. The master might look after the boatswain's stores and the setting up of the rigging, but, though he was nominally an executive officer, there was nobody in the ship actually under his command except the man at the wheel, and then only when "all hands" were on deck.

The increasing anomalies of the master's position were producing their natural effect: he was asking for more rank and more pay, and a better definition of his actual position. A committee was appointed to inquire into the grievances of his class, and, on the 3rd of March 1862, Captain Key forwarded a letter to the Commander-in-Chief expressing his views at length.

He admitted the anomalies of their position, and the justice of their claim for more rank and more pay, but asserted that neither could be given without prohibitory inconveniences. He took a broad and, for that date, a startling view of the whole situation. Masters, he said, were only of importance because no one else was trained to do their special duties of navigation and pilotage; but yet their general education was very much neglected. He thought the class ought to be abolished, and that the navigation of H.M. ships should be placed in the hands of the executive officers, who had already absorbed, out of the master's hands, the executive seamanship, which was his original *raison d'être* in the days when the pilot held high office.

Captain Key, in this case, wrote as an independent naval officer who was concerned to give an honest opinion, but was not concerned that it should prevail. Hence we see him change his method. He no longer stops short at what he thinks he can carry, but gives the whole of his thought to be taken or left by those who are responsible for forming a judgment, which he is not.

His views did not then prevail, but they did so ten years later. Then the authorities contented themselves with increasing the pay of the "master" class, increasing their nominal rank, and giving them new titles. Philosophers might have urged that it was always the thing which characterised the name, and not the name which characterised the thing. If a rose by any other name would smell as sweet, its thorn by any other name would prove as sharp. The change of name could not upset Captain Key's arguments, and when the master was labelled "staff-commander" they marked him obsolete, and prepared to abolish him as Key proposed.

The question of engineer officers for the navy was at this time, if it be not so still, a more embarrassing one than that of the navigating officers. Captain Key was directed to submit his views and proposals in respect of the whole matter, and he did so in a letter dated 13th of April 1863. The difficulty was then, as the difficulty is now, as to how much of the engineer officer should be head-worker, and how much of him should be hand-worker. It may be a subject of dispute as long as warships are driven by steam machinery; but it may be said that, at the time we are dealing with, the balance inclined heavily towards hand-working, and that it has ever since been inclining more and more towards head-working. The state of things existing, as revealed in Captain Key's letter, is almost startling to look back upon.

By existing regulations, he says, no theoretical or mathematical qualification was required on entry, beyond ability to keep accounts. For the next two grades, assistant engineers first class, and engineers, no more was required. The chief engineer must know the elements of mechanics, but got no help to learn in the lower grades.

The engineers of that day came chiefly from the "factory boys" of the dockyard. Such a boy had been working in the fitting or erecting shops for five years, on wages of from eight shillings to twelve shillings per week; at the end of this time, being eighteen years of age, he was selected by the chief engineer of the yard to undergo an examination as to his ability to keep accounts and his knowledge of the general principles of the steam-engine, which was a less stringent one than he had had to pass when he entered the yard. If he was successful in passing, he received an appointment in the navy as second-class assistant engineer, with the pay of £109, 10s. a year, and he put himself into the uniform of a naval officer.

The great step from "factory boy" to officer seemed to Captain Key to be out of all proportion to the acquirements necessary to attain it; and, moreover, the suddenness of the change was sufficient in many instances to unfit the officer altogether.

It must be asserted generally that the engineer officers of all ranks were insufficiently educated, and that the position on entry was too high for the attainments required.

The real remedy was to make the engineers more head-workers and less hand-workers. Their number should be greatly reduced, and the hand-working necessary should be carried out by a new class of petty officers to be called "engineer mechanics," who would mess, with some slight separation, beside the seamen on the lower-deck.

If the engineer officers were more carefully selected and better educated, and there were fewer of them, there would be no reason why they should not, on entry, become members of the gun-room mess, and so get rid of the unquestionable inconveniences of a separate engineer officers' mess.

Here, again, we may observe the difference of procedure exhibited by Captain Key, according to whether he was working towards improvement, where he was responsible, or discharging a general duty to the service. In the one case he asked for no more than he thought he could get—and generally got it in consequence; in the other case he offered his whole mind on the subject, and had no hesitation in advocating the most revolutionary changes, as in the cases of the masters and the engineers. He did not immediately gain his point. But years afterwards the policy he advocated was carried out, and he personally controlled the establishment of the engineer colleges at Portsmouth and Devonport, while the "engine-room artificers," first introduced in 1868–69, are nearly the exact model of his "engineer mechanics." The roots of his proposals struck deep, and the tree of his planting has grown and flourished ever since.

While he dealt in this broad and statesmanlike manner with the great question of personnel, his detailed dealings with the officers and men under his immediate command were characterised by a marked spirit of kindness. Though he was not, like Nelson, an enthusiastic and unreasoning lover of his kind, until his kind seemed ready to turn and rend him, he was, like Nelson, not a good hater. The carrying out of the necessities of discipline was painful to him, and though, whenever it came to a clear point, the cold requirements of rule converted him into a mere disciplinary machine, yet, as long as there was a chance of a culprit's reform, his hand was light upon him. To those under his command whom he deemed to deserve well of him, he was a strong friend; and whether the object of his regard were his second in command, or his office orderly, their claims on the service were properly pressed. But he was never extravagant of his praise, and he was the reverse of indiscriminate or weak. A stern disciplinarian he was not, but all through his letters during his service in the Steam Reserve at Devonport can be traced the use of the silken glove over the mailed hand.

In the December of 1863 Captain Key was offered the post of captain of the *Excellent*, and head of the Gunnery Department of the navy, and on the 2nd of July he laid down his office at Devonport and proceeded to take up his new one at Portsmouth.

CHAPTER XV

THE *EXCELLENT*—1863–1866

CAPTAIN KEY joined the *Excellent* in July 1863, and at once found himself in a most anomalous and difficult position. The four ironclads, *Warrior*, *Black Prince*, *Defence*, and *Resistance*, forming the first instalment of that class of ship, were complete and at sea, and were well reported on. In those ships a supposed balance had been struck between steam-power and sail-power; between the 4½-inch armour-plate and the 68-pounder gun. The second instalment, the *Minotaur*, *Northumberland*, *Agincourt*, *Achilles*, *Hector*, and *Valiant*, was in course of completion, and several wooden line-of-battle ships cut down and coated with armour—in cases 5½-inch—were also in hand. All these were also designed under the idea that some balance between offensive and defensive powers existed. It was only beginning to dawn on us that there was no balance; but we hardly realised that there could be no balance, because no conclusive experiments could be tried, and therefore the opinion of the time was what governed.

So the third instalment was in view in the instance of the *Bellerophon*, with 6-inch plating, which some gun—no one could yet say what—would be set up to balance or over-balance.

The fourth instalment was the *Royal Sovereign*, Captain Coles's turret ship, which it was contended would sweep away and supersede all before her by inaugurating an entirely new system of mounting guns on board ship.

The real condition was that there was a crowd of inventors, designers, and manufacturers, all let loose with their inventive and constructive powers in the highest state of activity, each of them intent on his own point, and none of them under such control as could harmonise their work with that of the others.

The designers of guns were only stopped in their progress by the tenacity of the metals they dealt with; the makers of armour-plates felt little limit as to the thickness they could roll, as it was only governed by the cost and power of the machinery set up. As soon as the gun-producer had demolished the last armour-plate he washed his hands of matters till another plate beat him, and then the armour-producer in his turn stood aside. How this rivalry in inventive power was to affect the navy was nothing to either of the rivals. There was an immense public opinion clamouring for, and forcing on, the adoption of each nominal advance in offensive and defensive power, and those who clamoured loudest had least thought out the nature of an excessively complex problem. What had to be considered was the fighting power of a fleet armed and armoured in one way, against that of a fleet armed and armoured in another way, which cost the same money and employed the same number of men. What was really dealt with was—what weight of gun would penetrate a certain thickness of armour; and what thickness of armour would resist the projectiles of a certain weight of gun? The mass of this rivalry was beside the naval question: if the navy attempted to follow it, it would either be led into a cul-de-sac or would collapse. Warships must be taken as a whole, and could not in the end be constructed simply to carry a certain thickness of armour or a certain weight of gun. The difficulty at the juncture of which we speak was, that most men thought this latter was the real question, and urged it. Even the subsidiary question of mounting, upon which the utilisation of the heavier gun depended, was left more or less aside by the critics. But those who saw the real case, and had to deal with it, recognised that great bounds in advance were impossible to the navy, and that, after all, existing ships had to be armed and sent to sea.

The fundamental difficulties which surrounded Captain Key in the *Excellent*, and which almost beat him in the end, were the attempts to put new wine into old bottles. The Board of Ordnance had been done away with before anyone saw that the gun revolution was at hand. Ordnance, which concerned the navy much more than the army, was specially under the War Office; and there was no department of ordnance and no staff at the Admiralty. The ultimate decision on a naval ordnance question rested nominally with the Board; practically with one Lord without any staff whatever, and with or without consultation with the Controller, who was also without expert staff. In the matter of guns, the Royal Gun Factory at Woolwich and Sir William Armstrong were the chief competitors, but Whitworth was hotly contending for Armstrong's place, and there was a crowd of independent inventors of guns intervening. The Royal Carriage Department was by way of controlling the mounting, but it was not easy to say where its functions ended and those of the Royal Dockyards began. Here, again, a certain number of independent inventors intervened; but inasmuch as the gun-mounter met a want which he did not create, while the gun-designer and the armour-designer created the wants, this department of gun-mounting, however indispensable, did not attract so much public attention.

There was really only one person competent by his position to control the whole of this seething mass of rivalries, and to turn the rushing and foaming streams into designed channels, and that was the captain of the *Excellent*. He alone was assisted by a staff competent to take every point bearing on naval ordnance into consideration, and to give it its just weight. He alone put the guns and the armour-plates under the conditions in which actual war would find them, and tested them thus. He alone saw with his own eyes, and was brought into personal contact with, all the actual conditions of the time, material, personal, and administrative, in regard to the fighting capacities of ships, and was able to judge of the general direction in which all things were tending.

But his official position was such that it was impossible to define its boundaries. He might be found with full control and authority to decide any point finally. He might be overruled and absolutely ignored, if it happened that at any time someone was persuasive enough or powerful enough to cause that course to be taken. The *Excellent* had been established in 1830 as a school of gunnery, when gunnery could be taught as you might teach the violin, dealing with an unchanged and unchanging instrument, and when there were no controversies. In theory it was a teaching establishment still, and the captain of the *Excellent* was chief instructor. In practice it was the final determinator of the fitness or unfitness of fighting inventions for use in the navy, and the captain of the *Excellent* was the moderator in a tremendous experimental revolution, which was running riot in all directions.

It was the custom, Captain Key wrote towards the close of his career in the ship, "to refer all questions connected with ordnance and armament fittings for the opinion of the captain of the *Excellent*, in order that he might afford the Admiralty the benefit of his experience and that of the officers of the ship as to the effect any alteration might have on the instruction of our men in the exercise of the guns, and the efficiency or otherwise of the proposals as regards the offensive power of a ship's armament. This mode of proceeding seems to have been wisely adopted, as uniformity of system is a necessity for the efficiency of our fleet, and the opinion of those whose attention is closely directed to one point cannot fail to be of some service. I should deprecate the idea that the captain of the *Excellent*, or any other subordinate, should be considered in any way as final authority. The decision must, of course, in all cases rest with their Lordships."

But the fact was that their Lordships' authority was necessarily weak from want of expert staff, and because their absolute power of decision was more theoretical than real. The cost of naval ordnance appeared in the army estimates, and the War Office controlled the expenditure. It therefore had opinions, and strong ones, on all that pertained to naval ordnance, and it was exceedingly difficult for the Admiralty to override them if they ran counter to those entertained by the Board.

It might be said that, at the date of Captain Key's joining the *Excellent*, there were at least six departments with co-ordinate advisory powers, which pressed with varying persistency and success upon the War Office and Admiralty decisions. There was the Royal Gun Factory, the Royal Carriage Department, and the Royal Laboratory Department, into which Woolwich Arsenal was divided. There was the Ordnance Select Committee, where military opinion largely predominated. There was really Sir William Armstrong with astonishing capacity, backed by a powerful establishment, and a strong public opinion. And there was the captain of the *Excellent*, the sole authority, as has been said, who was called on to regard, and to report on, naval fighting-power as a whole.

Every one of these several departments became, under the stress of circumstances, a separate inventor. It either originated designs, or modified those of others. Sometimes it adopted and furthered designs of which it approved. But in every case it could not escape a certain quantity of partisanship, which inevitably led to friction and collision. The general feeling a student of the time and circumstance must have is one of wonder that things ever escaped from chaos.[1] The *Excellent*, perhaps, was freer from the passion to invent, and therefore from partisanship; but it is fair to remember that the department had less control over material and manufacturing power than any of the others, and was therefore restricted from following out inventive proclivities, if it had them.

Under the Admiralty was the Controller, at the head of a separate department which was responsible for building and completing our warships, and therefore inextricably mixed up with their armaments. But his control in this direction was limited all round. Each one of the departments above named might at any moment have a voice predominating over the Controller's as to what guns were to be carried, where they were to be placed, and how they were to be mounted. He was the subordinate of the Board of Admiralty, just as the captain of the *Excellent* was, and, if the two differed on any question, the Board alone could decide between them. But then the captain of the *Excellent* parted with his responsibility when he had given his opinion. If he carried the Board with him, the Controller had to carry out the captain of the *Excellent's* views. The situation was an impossible one. The old bottles answered very well to hold the old wine of an almost unchanging artillery and class of ship; but they were certain to burst when the new wine of an ordnance that was in the highest state of fermentation, upturning everything, and yet doubting as to whether it would not be vinegar in the end, was poured into them.

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[1] Mr. Baillie, in the House of Commons in June 1865, made it a special subject of complaint that the Ordnance Select Committee were no more than a body of inventors carrying out experiments at the public expense.

In this undefined, difficult, and most unsatisfactory position Captain Key now found himself. It was possible, of course, for a man to constitute himself a mere repeating post as captain of the *Excellent*, to make no attempt to moderate or reconcile; to carry out the experiments he was ordered to conduct; to report the resulting facts and leave the rest to others. It was an easy and a pleasant course; but Captain Key was always a man of convictions, loyal to truth, and following, without flinching, the call of his duty. No detail of the work now before him was passed by or slurred over; but, as a consequence, he was in constant collision with counteracting opinions. It was really, for him, war all round, and it would have been personal war for anyone with a less keen sense of public good and a less imperturbable temper.

The general issues which were to be in course of determination during the three years for which Captain Key was to be at the head of the naval gunnery establishment were not very numerous, but they interlaced in a remarkable way, and the subsidiary issues which they dragged in their train were innumerable and baffling beyond conception. The greater issues might be theoretically determined, but not one of them could be practically applied in the navy until all the subsidiary issues were also determined; and it was always possible, and sometimes came to pass, that the subsidiary issues swallowed up the main one, and it was lost.

A gigantic mistake had been made in plunging with scarcely a limit into the adoption of the Armstrong system of breech-loading rifled guns. Very likely the truth is, that Lord Armstrong's, or, as he then was, Mr. Armstrong's, hand was as much forced as he could be said to have forced the hand of the Government. By an exercise of the most astonishing forethought and skill he had, as early as the end of the year 1854, produced the finest breech-loading rifled field-piece in the world, just at the moment the demand arose for it. Doubtless, it was then not in his mind to put the gun into the navy at all except as a field-piece, probably he had never considered whether a system which was so well adapted to a 12-pounder would answer if extended to a gun firing a 110-lb. projectile—heavier, that is, than any naval gun in use at the time had fired.

But the system swept into the navy, or was swept into it, so that at the end of Captain Key's career in the *Excellent* there were fourteen different varieties of the gun in use, while at the beginning of his career there was a practical end of the manufacture, and a general condemnation of the whole system. It must be noted as a characteristic of the man we are dealing with, that his was the voice which appears to have been most uplifted to make the best of our bad bargain. While most naval officers were exclaiming against the retention of the Armstrong breech-loader as a boat's gun, Key was for overruling them. When the continued and almost increasing difficulties with the breech-loading 110-pounder determined the Ordnance Select Committee to propose the reduction of the powder-charge and shell-charge, Key urged that things were not so bad as they were painted; that we ought to do the best we could with it; that the range and the shell-charge were the best features of the weapon; and that, at least, the shell-charge might be maintained. When the Committee carried the Board of Admiralty against him, he wrote and expressed his regret.[1]

The failure of this system—all but the method of building up the gun, which remained a perfect success—left the two questions open, namely, whether we were to seek a new system of rifled ordnance, or whether we were to revert to smooth-bores and spherical shot and shell? and secondly, whether we were to revert to our old muzzle-loading, or seek a new system of breech-loading? The cast-iron 68-pounder of nearly 5 tons weight was the plate-piercing gun of the time, but the 4½-inch plate with backing was practically impenetrable to its cast-iron shot. It no doubt seemed to press that there should be guns to master such armour, but, after all was said and done, the naval architects in our first batch of ironclads had only succeeded in covering part of their sides with any armour, and a large portion even at the water-line was penetrable by the lightest shot or shell. The second batch had their sides covered to a greater extent with armour, and, though it was in places increased to 5½ inches, it was in others reduced to 2½ inches, so that it was hardly true to suppose that because a *Warrior* target was impervious to 68-lb. cast-iron shot, therefore none of the first or second batches of ironclads could be subdued by 68-pounders alone.

Captain Key had not been more than four months in the ship when he began to raise this fundamental question even as to 4½-inch plates. In November 1863, after noting a good many 4½, 5, and 5½-inch plates resisting 68-lb. cast-iron shot, he earnestly desired to see what the nature of the material of which the shot was composed might have to do with it. Getting his wish in January 1864, he found that at 200 yards, when a 68-lb. cast-iron shot only indented a 4½-inch plate 2.1 inches, a Frith's steel 68-lb. shot passed clean through the plate and 7 inches into the side behind it. Experiments with another gun had shown the same results, and thereupon Captain Key had asked whether it might not be possible still further to improve the projectile, and if so, could not a steel *shell* be forced through? Further, could not a more powerful explosive than gunpowder be used as a charge for shell, enabling its walls to be made thick enough to stand penetration without breaking up? Captain Key no doubt had gun-cotton, which was then coming to the front, in his mind, and we can easily note the general position as he saw it. Men were then raging for a complete revolution and upturning of the whole offensive and defensive naval question as regarded material. Was it—we can conceive Captain Key saying—altogether wise to make any tremendous plunges, when smaller and more certain steps might bring about as good results? The six ships of the second batch of ironclads were not at all revolutionary, and were not prepared for a revolutionary armament. Must they not be carefully considered?

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[1] The trouble with the vent-pieces of the Armstrong breech-loaders was a subject of correspondence all through Captain Key's time in the *Excellent*. I count, at least, five letters about them in 1863, seven in 1864, five in 1865, and six in 1866.

It was claimed, indeed, that there was pressure to advance by leaps and bounds, because of the progress of armaments and armouring abroad. Attention was called to France and the United States, but, when the matter was looked coolly into, it was seen that the American system of large calibre cast-iron guns was powerless against our armour, and could in no case compare with the Armstrong system of building up wrought-iron guns. Their own system of plating would not for a moment resist our 68-pounder. With France it was the same. Her system of plating had been notoriously weaker than ours, and her guns generally were little able to compete with our armour.[1]

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[1] It is true that, in the French ships of the *Flandre* class—wooden armour-clad frigates, ten of which were building and completing between 1863 and 1866, and which compared with our own *Prince Consort* class of corresponding date—large areas of the side were covered with 5½-inch plating, while the *Prince Consort* did not go beyond 4½ inches. Yet the *Flandre* target required only 16 foot-tons

But these general reasonings were not the main forces in operation. It was always the practice to speak of the maximum thickness of armour on any area of the ship's side, which might cover a comparatively small part of it, as if it covered the whole. In the same way, men were apt to think and speak as if the mounting of a single excessively heavy gun in a ship would make her exceptionally powerful, no matter what number of powerful, but still less powerful, guns were displaced to make room for it. The targets and the guns at Shoeburyness were held to be real measures of the defensive and offensive powers of ships, and, as we know now, controlled the aims of designers, until they culminated in the production of the *Inflexible*, with a small patch of 24-inch armour and four 80-ton guns. Practically, since then, the pendulum has been swinging back again, reducing the thickness and extending the area of the armour carried, reducing the weight, and increasing the number, of the guns carried. Doubtless, the swing has been aided by inventions which have increased the resistance of armour and the power of guns, weight for weight; but the reaction is independent of these supports to it.

These things were natural, and reasonably congruous with the conditions of the time. Sir William Armstrong's first system of breech-loading rifled guns having proved, on the whole, a mistake, it was natural that he should attempt to replace it by a better; and thus Captain Key found himself almost immediately called on to consider the merits of Armstrong's wedge system of breech-loading guns, which was in some respects similar to a system being introduced with apparent success by Krupp in Germany.

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of energy per inch of shot's circumference to penetrate it, while the *Warrior* target called for 33 foot-tons, and the *Lord Clyde*, which was in commission in 1866, required 58 foot-tons. Then as to guns, the latest French ships had not got beyond an armament the bulk of which was composed of rifled 66-pounders with but two 110-pounder rifled guns. The *Prince Consort's* armament, when she was commissioned six months after Captain Key joined the *Excellent*, was twenty-four 68-pounder smooth-bores and eight of Armstrong's 110-pounder rifled guns. Evidently, therefore, we were quite up to the French in the way of progress, and if there was pressure on us at all it was to increase the quantity rather than to improve the quality of what we had.—See *Our Ironclad Ships*, p. 37.

It was also natural that, having introduced the system of lead-coated projectiles, which necessitated breech-loading in rifled guns, but which had not proved on the whole satisfactory, Sir William Armstrong should endeavour to devise a system of rifling which did not involve lead-coated projectiles, or necessarily enforce the use of breech-loading. Therefore Captain Key, in a very few months, was called on to experiment with, and pronounce upon, Armstrong's "shunt" system of rifling—a system where projectiles with copper studs fixed into the surface of the cylindrical pointed projectile were rammed in from the muzzle, base first, with the studs fitting loosely in one set of grooves, to come out, when fired, point first, with the studs gripping tightly in another set of grooves, and acquiring the necessary rotation in the process.

Seeing, again, the larger areas of side which were covered by armour in our second batch of ironclads—a plan largely adopted in the French navy—and looking at what had been done in the United States, even with cast-iron, by the Rodman and Dahlgren systems, in increasing the weight and power of their guns, it was natural and appropriate that the Armstrong system of building up guns should be applied to produce an improvement on the 68-pounders.

The Admiralty itself appears to have stepped into the inventive arena to this reasonable and limited extent. The "Somerset" gun and the "Frederick" gun, christened after the Duke of Somerset, the First Lord of the Admiralty, and one of the Naval Lords, were the familiar titles of such guns at the time.

Thus, as early as September 1863, we find Captain Key reporting on a specimen gun of about six tons weight, with a bore of 9.2 inches, firing a solid shot of 100 lbs. weight with a charge of 25 lbs. of powder. As the 68-pounder weighed nearly five tons, had a bore of 8 inches, and fired a charge of 16 lbs. of powder, this was an advance which might be supposed to be within compass, and did not threaten to delay indefinitely the arming of the second batch of ironclads. As early as November 1863

Captain Key found that this gun was master of 5½-inch plating when steel shot was used at 200 yards range. He was of opinion that, with 33 lbs. of powder—which the gun would bear—it would master 5½-inch armour at 800 yards range.

But it was one thing to design an efficient gun of this weight and character, and another to make it efficient on board ship. The difficulty of controlling Armstrong's breech-loading 110-pounders with a charge of 12 lbs. was about to determine a reduction in the charge, which Captain Key thought a serious reduction in the power of the gun. In this new gun the weight of it was to be increased 26 per cent. over that of the well-known 68-pounders, but the charge of powder was to be increased from 56 to over 100 per cent. The appliances did not exist by which such a gun could be made effective in the new ships that might be called on to mount it. It was, as Captain Key put it in September 1863, a question for the Controller to determine whether such a gun, or rather a heavier one, could be worked on the broadside.

These were all reasonable and congruous steps, but they led, as above, only to this open question. So far as the navy was concerned, there were no grounds for pushing things further. What was pushing was the abstract problem of ascertaining the point at which thickness of armour-plate and weight of powder-charge in a gun, reached limits beyond which manufacture could not carry them, and it was expected that the whole navy was to wait upon its determination. Rather, perhaps—as anonymous writers claiming authority were found, as early as February 1864, complaining of delay in adopting guns afloat that were, in theory at least, eight times as powerful as the 68-pounders—it was expected that the navy should enter on a career of adopting from month to month the newest inventions in order to discard them also from month to month as soon as a newer appeared; and continually discarding and renewing fleets in order to suit the proceeding.

So, long before the suitability of the 6 or 6½-ton smooth-bore gun could be determined for the naval service, and still longer before its mounting could be settled—that is, early in September 1863—smooth-bore guns of 12-tons weight were being forwarded to the captain of the *Excellent* for trial and report. Not only so, but even then a gun was in being, nearly twice the weight of the last, to fire a 500-lb. projectile with charges of 50, 60, 70, and 80 lb. of powder to begin with.

The two things which were becoming certain out of all this racing that was pushing an unwilling navy in directions it did not want to follow, were — that very large guns could be made on Armstrong's principle, and that there was a good deal of margin yet before the maximum thickness of plating which it was possible to roll and bolt to a ship's side was reached. What the two things had to say to an efficient navy, was that which very few people took note of. It was left for the captain of the *Excellent* to pronounce opinions on, but it was nearly impossible to say who, or what, would ultimately decide.

By the beginning of October 1863 he had sufficient experience of the 6½-ton smooth-bore 100-pounder to assign its position. He found it superior to any service gun against armour, and claimed that it should be substituted for all guns that were to be fought behind armour on board ship. He gave the height of axis which should govern the mounting, and the dimensions of the port it should be fought in. They were to allow it to have 30° of training each way, and elevation sufficient to range 3300 yards, which he considered ample. Modifications of the wooden carriage and slide, on which 5-ton guns were already mounted, promised to suffice—at anyrate as an expedient—to allow of the gun being carried in the ships already in course of completion, but waiting to have their armament settled. Before the end of the year, he was impressing on the various bodies who had to deal with the matter the necessity of getting maximum power out of the gun by improving not only the projectile propelled, but the gunpowder used to propel it. If all were done that might be in these directions, the gun was probably master of 5½-inch armour at 800 yards.

At the beginning of 1864, after some little experience of a 12-ton gun, Captain Key was laying it down that, with the knowledge of the day, the 6½-ton gun reached the limit of weight that could be worked in a sea-way. The difficulties of controlling the gun were not surmounted, and it was getting plain that wood was not a suitable material for the mounting.

Immediately behind this question of adopting a 6½-ton instead of a 5-ton gun, as the staple armament of the ironclad, which was, as Captain Key expressed it in March 1864, "within our reach, and likely to be so for an indefinite period," was the question whether it was to be a muzzle-loading rifled 112-pounder, or to remain a 100-pounder muzzle-loading smooth-bore? Armstrong's proposal was to convert it into a 7-inch rifled shunt gun. It was a momentous question of general principle, and as such, Captain Key began to debate it before the end of 1863. It was clear that if the penetration of armour-plates at long distances was the object sought, then rifled guns, or guns to fire elongated projectiles, were indispensable. It was not clear to him that such was the object, but it must be taken account of. There was yet another point which was striking him forcibly, and which he drew attention to in March 1864. The powerful elongated shell was an important advantage which rifling gave. Would it be possible, while keeping the 9-inch bore, and preserving the 6½-ton gun as an armour-piercing weapon with steel spherical shot, to lightly rifle it so that it might throw—for bombarding purposes, and against wooden ships—an elongated shell of about 145 lb.?

He set out the pros and cons of the whole question at this time. No rifled gun had yet come to the *Excellent* that was efficient as a broadside gun. That was so far certain. The advantages of rifling were:—(1) Great range; (2) great accuracy; (3) the use of powerful shell; (4) retention of velocity (and therefore of capacity to penetrate armour) to a considerable range. The two first of these were of value to a ship of war under special circumstances only, and would be to a great extent superfluous, if afforded to all the guns on a broadside. Similarly, the last was applicable only to positions where great penetration was required at long ranges.

No doubt this argument wanted completion. It was in part characteristic of the man that in his position it should not be absolutely complete, but perhaps it was more of the temper of the time, and of the general condition of the naval mind, that it should have been left incomplete. He assumed, and in another place he defined the assumption, that there would be close action in future naval battles. Clearly, it did not follow. We could not predicate the element of equal willingness to fight at close quarters on the part of two hostile fleets. History was against it. The complement of the shorter-ranged guns in one fleet was higher speed, if it was not to be beaten by the longer-ranged guns of the other. It was impossible, logically, to recommend the shorter-ranged guns, unless the higher speed was coupled with them.[1]

The advantages of the smooth-bore were:—(1) Simplicity; (2) rapidity of fire; (3) reduced strain on the gun, and therefore greater durability; (4) greater initial velocity. Captain Key was here taking things as he found them. The second and the fourth advantage were not inherent—as we have since observed—in a smooth-bore system as against a rifled system. They were perhaps true enough of *the* smooth-bore system, and *the* rifled systems then before him.

He was of opinion that, under the ordinary circumstances of action, the accuracy of a good smooth-bore gun would be equal to that of a rifled gun at any distance under 1500 yards, as that of each depended on the skill of the captain of the gun.

This was at the time undoubtedly the prevailing opinion. It remains difficult to say what truth there was in it, for I believe it has never been tested. The extreme accuracy of the rifled gun, as gun, has been supplemented by advantages of mounting, which have never been conferred on the smooth-bore, so that it is arguable to this day whether, at the short range mentioned, the percentage of hits would not be equalised by the difficulties of accurate laying which obtain from an unsteady platform.

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[1] Two months after this expression of opinion the battle of Heligoland was fought between the Austro-Prussian and Danish Fleets. The Austro-Prussian Fleet was beaten at long range.

Captain Key went on to say, that at close quarters the smooth-bore was in every respect superior to the rifled gun of his day. But then, coming to the particular point of dealing with the 6½-ton gun, he said that no accurate comparison could be drawn between it as a 9.2-inch smooth-bore, and as a 7-inch muzzle-loading rifled gun, until the latter was produced and tried against the former. But still the practical question remained. We had in the 100-pounder smooth-bore 6½-ton gun practically the most powerful weapon that was certainly fit for the service. If the idea of the elongated shell was feasible, the advanced power of the British fleet was assured.

A few days later he reiterated these views; saying, that after mature consideration, and looking to the ordinary circumstances under which naval actions had been and probably would be fought, great accuracy and long range would be of inferior value to rapidity of fire, security against derangement of the gun, and penetrating power at short ranges. He thought, therefore, that smooth-bore guns should continue to form a large proportion of the broadside armament of our large ships, rifled guns being confined to the upper-deck, and the bow and stern ports of gun-decks. He repeated his queries as to the possibility of the 6½-ton gun being lightly rifled so as to fire a bombarding elongated shell of 145 lbs., as well as the spherical shot and shell for ordinary purposes.

This idea of keeping the rifled guns for upper-deck service was evidently derived from his experience in the Baltic, where there had often been attempts to use upper-deck guns with great elevation, in order to bombard distant points. The idea of firing spherical shot from rifled guns became a common one, favoured by Sir William Armstrong, from the converse point of view, that is, of firing spherical shot from the small-bored rifle gun, instead of firing elongated shell from the large-bored smooth-bore, rifled for the purpose. The general result was the introduction, in the end, of what was called the "double shell" for those special bombarding purposes which Key had mentioned.

It, of course, will appear that such general views as these were short-sighted. We look now at the course that things have taken, at the universal rifling of naval ordnance, and at the ultimate 110-ton gun, and we think that Captain Key might have made better forecasts. But we must remember that had the navy been free and paramount in its choice, it does not follow that it would have taken the course ultimately pursued. There was not, as we have seen, any real pressure on the part of foreign navies to force the hands of our own, and it is by no means certain that any decided course followed by the British Navy would not have been generally adopted by others. The real pressure came from the inventor acting on powers that were outside the navy, forcing it to change its mind in spite of itself. So, from September 1863, the 12-ton smooth-bore gun came to be under trial in the *Excellent*, though no one in the establishment could say what was to be done with it; and so by May 1864 the 7-inch muzzle-loading rifled shunt gun of 6½ tons had been tried in the *Excellent*, and had a good deal shaken the position of the smooth-bore. Captain Key reported that it was more than equal to naval requirements. It could be worked in a sea-way, and had equal penetrative power with the smooth-bore at 200 yards. It was admirably adapted for the naval service. No doubt, it was still a question how far it should be introduced. It was necessary to go on trying the smooth-bore and the rifled gun side by side, until the question of endurance and all other questions in controversy had been determined.

But the rifling of the heavy guns, and the consequent gradual abolition of smooth-bores, went on apart altogether from naval opinion. The navy, as represented by the *Excellent*, was glad to have the increased shell power which the elongated projectile used in the rifled gun gave it, but it did not so much desire increased energy at longer ranges, which was the principal aim of the gun designers. Armstrong's shunt system of rifling, though it passed the *Excellent* with limited approval, was superseded by the simpler rifling, still based, however, upon the device of copper studs in the projectile, which came to be called the "Woolwich system."

By February 1865, Mr. Fraser, the superintendent of the Royal Gun Factories, was beginning, indeed, to supersede not only the shunt rifling, but the structure of the guns, which, by modifying Armstrong's plans, became as efficient, but much less costly. 12½-ton guns embodying these new principles were proved at Woolwich satisfactorily about the 21st of that month.

The *Hercules* target with 9 inches of outer plating, more than 3 feet of backing, and an inner skin of some 2½ inches of iron, altogether beat Armstrong's 300-pounder 12½-ton muzzle-loading rifled gun in June 1865, and Sir William Armstrong expressed the opinion that it would beat a 600-lb. projectile, unless very abnormal charges were used. The issue was, of course, a false one. It was nothing that three 12-ton shunt guns, firing 10½-inch projectiles of 300-lb. weight, hardly broke through the plate at 200 yards, and left the backing uninjured. The *Hercules* was only to have a small patch of this armoured side. It was quite a chance whether so small a patch would ever be touched at all in action. It was impossible to assert that the *Hercules* could not be conquered unless that patch was penetrated. Was it, then, necessary to greatly increase the individual power of the guns in a ship destined to match the *Hercules*, while, as a consequence, their number was greatly decreased? It was impossible so to argue; but Krupp, at Essen, was making 300 and 600-pounders for foreign governments, and Blakeley had made thirty or forty 600-pounders for Russia; why stop to argue, when England had only one 600-pounder under experiment at Shoeburyness? This was the sort of logic that took the control of matters out of the hands of the *Excellent* and of the navy, and pushed on the rifling of all guns.

All this time, it will be noticed, the question of breech-loading *versus* muzzle-loading had been quietly dropping out. The real fact seems to have been that there was no inventor pressing a likely system of breech-loading, while there were almost scores of inventors pressing forward systems of building guns or rifling them as muzzle-loaders. It is evident from what has been said, that if Captain Key truly represented the views of the navy, no pressure for breech-loaders could come from it. It had, so far, had no reason to believe that a breech-loader was a more rapid firing gun than a muzzle-loader; and if this were so, the only merit of breech-loading was to develop increased energy by the use of longer barrels. But no one was asking, from the naval side, for increased energy. The navy wanted rapid-firing guns capable of penetrating at short range, and the muzzle-loading rifled guns offered were already beyond its requirements.

Though, therefore, in September 1864 the *Excellent's* people knew that there were eighty-three of Armstrong's wedge 64-pounder breech-loaders in being, and though in October Captain Key thought there was no serious defect in that gun; though, in treating of the Armstrong-Whitworth controversy in November, Captain Key thought that the Armstrong 70-pounder wedge gun had the rapidity of fire which he looked for, yet it is not surprising that he should have considered that practical difficulties outweighed it.

In May 1865, though the 40-pounder breech-loading wedge gun was considered a service gun, yet very few of them had been made, and they were only to be supplied to special classes of ships. The 64-pounder wedge breech-loading gun was also thought fit for sea-service at this time by Captain Key, but he was presently informed that it was not intended to issue it to the navy. There were breech-loading systems of other designers from time to time under trial, but by the end of October 1865 Captain Key was of opinion that none was as good as Armstrong's wedge system. Moreover, he thought that if the existing Armstrong breech-loaders could not all be converted to the wedge system, they had better be done away with altogether.

At the opening of 1866, the question—apart from any influence of Captain Key's—appears to have dropped down to a consideration of the relative value of breech-loading and muzzle-loading for field and boat guns only; and Key, in an elaborate and detailed assemblage of pros and cons, advised that the breech-loading guns should be wholly withdrawn from the navy. In fact, there never was before the captain of the *Excellent* in these years any real question of substituting breech-loading for muzzle-loading. There was no plan suitable for use with the heavier guns that were being adopted, and no sufficient advantages could be shown to exist in preserving a breech-loading system for the smaller guns. And thus breech-loading dropped out, until, in the fulness of time, it was brought in by the captain of the *Excellent*, then First Sea Lord of the Admiralty.

Many descriptions of mounting had been tried with these 6½-ton guns, with rolling motion in a gun-boat at sea. All through the year 1864 such trials went on. There were difficulties as to controlling recoil, owing to the larger absolute and proportionate charges that were used. Being called on in September 1863 to report on the question of mounting heavy guns, Key was forced to say that there was no data—he did not know enough to say what course should be taken. The difficulty in the naval mind arose from its intense dislike to depart from simplicity in the character of the gun-carriages. The great bulk of the guns then mounted afloat were on what were called "truck carriages." The pattern was certainly not less, and it might be much more, than a century old. It was a stout wooden carriage, running on four wooden wheels or trucks, controlled only on recoil, in firing, by a stout rope called a "breeching," which ran through a ring cast in the breech of the gun and was secured to rings in the ship's side. When the gun was fired it flew back with a jerk, and was caught and checked only by the breeching. Sometimes, as the old artillerists expressed it, the gun recoiled "too boisterously," and then the breeching gave way, causing perhaps serious accidents. The great improvement—but only for carronades and lighter guns—had been the invention of Sir Thomas Hardy—Nelson's Trafalgar Hardy—where the gun-carriage, without trucks, slid in and out on iron rails which were fixed to a wooden slide fastened to the ship's side by a "pivot," so as to allow of the gun's being "trained" in its port. There was an arrangement called a "compressor" attached to the carriage, which, dropping through a slot in the centre of the slide, could be set up to grip carriage and slide together, and so check the recoil when the gun was fired, reducing the sudden strain on the breeching, and perhaps enabling the space necessary for recoil to be reduced. There were also certain mountings, somewhat on the same principle, called "Marshall's carriages," which had been in vogue thirty years before, which had dropped out of use, but the memory of which was now resuscitated in part solution of the general difficulty. This idea of slide and carriage had been largely developed in the arrangements made for working the heavy 10-inch and 8-inch shell guns mounted at the bows and sterns of paddle-steamers. But these were "upper-deck guns," and it was by no means congruous to the then naval conception that there should be "slide carriages" for guns mounted between decks and worked in ordinary broadside ports.

So it was attempted to put the new wine of the Armstrong breech-loading rifled 110-pounder into the old bottles of what were called "rear-chock carriages." These were simply the old truck carriages, with the rear trucks removed permanently; it being part of the ordinary drill to remove them temporarily when firing guns with rolling motion. In the autumn of 1863 these new guns were so mounted on old carriages in the flagship on the West India station—the *Nile*. The plan would not answer, and yet we had got no further than to try and make it answer. Captain Key was not able to say, until 30th October 1863, that slide carriages must be looked on as preferable to rear-chock carriages. What we should now regard as a very strange consideration, greatly hampered progress in adapting new mountings to the new guns. It was part of the drill in most ships to transport guns working in one port and to work them in another. The exercise was far from incongruous to the conception of fighting under sail; for then, as experience had often shown, the wind and the enemy between them had fixed the position of the ship, and deprived her altogether of the power of firing at the enemy unless guns were transported to ports where no guns were usually carried. But, obviously, the idea was not congruous to fighting under steam, where it would probably take less time to move the whole ship than it would take to move the gun.[1] But, nevertheless, it was held to be a distinct objection to mounting guns on slide carriages in broadside ports, that they could not be transported. When this idea was abandoned, and the general use of slide carriages was accepted, the advance was still slow. The old compressors were of little service when applied to these heavier guns with large charges, and it was being discovered that wood was no longer sufficiently strong to stand the shock. On the other hand, there was the strongest objection to the employment of iron, because of the danger held to attach to its splinters when struck by the enemy's shot.

Behind these actual and traditional difficulties lay the profoundly revolutionary ideas involved in Captain Coles's turret, or turn-table, system of mounting guns. The *Royal Sovereign*, a wooden line-of-battle ship, engined, and cut down so as to mount four turrets to carry at least five 12-ton guns, was day by day approaching completion under Captain Coles's and Captain Key's superintendence. Her claim was to drive out every other class of ship. Her advocates, numerous and very powerful, declared that the navy must find means to mount whatever guns the inventor produced, and, whatever might be said and done, 12-ton and 22-ton guns, which were even then in existence, could not be worked and mounted on the broadside.[1] Strong partisanship marked each side on the broadside *versus* turret controversy, and it very much added to Captain Key's difficulties.

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[1] The incongruity was shown in the fight in May 1864 between the *Alabama* and the *Kearsarge*, when the ships circled seven times round a centre; the form of the battle being governed by the fact that the *Alabama* had trained all her guns upon the starboard side.

The real points were, indeed, not then seen. If it was going to be possible that what had been called line-of-battle ships, or what we now call "battle ships" simply, should carry eight or ten heavy guns in four or five turrets, following the pattern of the *Royal Sovereign*, it would hardly be possible to design a more powerful ship on the same displacement; for the *Royal Sovereign* was completely armoured, which no broadside ship was; and yet she was essentially a broadside ship, capable of fighting any other broadside ship, not only because of the individual weight of her guns, but because of their number. To do what she did, a broadside ship must mount double the number of her guns, and this was so obvious a loss, that it was clear the *Royal Sovereign* had, so far, an enormous advantage. Much of the argument in favour of the turret system rested on the number of guns carried in the *Royal Sovereign*; yet, when Captain Coles had his hands free in the cases of the *Scorpion* and *Wivern* built for the Confederate Government, each was given two turrets and no more. A later design for mounting 600-pounders came down to one turret. Much of the practical experience was derived from the American monitors; and the *Rolf Krake*, which Captain Coles had designed for the Danes, whose behaviour under fire of the Prussian batteries in March 1864 was much quoted on the side of the turret advocates, was a single-turret ship.

But not at all impossibly, though naval men did not easily recognise it, the chief objection to the turret system lay in the difficulty of combining it with a full sailing rig.

However, the *Royal Sovereign* was a very complete development of the system, and a very powerful ship.

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[1] This argument was no doubt entirely wrong. It became common and easy to work 12-ton and 18-ton guns in broadside ports. The *Alexandra* mounted 22-ton guns so, and at least as late as 1880 the French mounted 22-ton guns in ordinary broadside ports with ease, and in a much simpler manner than we did.

Captain Key got a perfect knowledge of her, as he continually advised about her armament and fittings, and, when she was complete, was constantly at sea in her, making tests and experiments. By the middle of 1865 the *Royal Sovereign* was practically complete, and he formulated his opinions on the turret system.

The *Royal Sovereign* was thoroughly efficient, and though everything in her fittings had to be thought out afresh, because of her armament, yet all worked well. The advantages of the turret system were:—(1) Great command of horizontal training, which would be especially useful if engines or steering gear were disabled in action;[1] and it might enable a ship in a swell to be placed so as to secure a steady platform. (2) The power of training while loading, to turn away the port for safety; to keep the sea out of the port, or to keep the gun bearing. (3) There was more complete security for the gun's crew. (4) The removal of a large portion of the weight in armour from the side to amidships. Captain Key thought the first of these advantages the most important.

The disadvantages he held to be as follows:—(1) There were fewer guns, and the offensive and defensive power would be reduced if the turret ship were attacked by more than one ship or fort at the same time. (2) If one gun or one turret were disabled, a larger proportion of the armament would be thrown out. (3) The turret machinery was liable to be damaged or disabled. (4) Heavy guns could not be worked with the same rapidity in a turret as on the broadside, as the men have not so much space to work in, and do not stand on a level with the gun-carriage.

Here Captain Key was speaking by the card, for by this date most of the mounting difficulties had been got over, and the 12-ton gun had been successfully introduced into the armament of the *Minotaur*. He showed that, with a crew of thirty men to a turret in the *Royal Sovereign*, the interval between the rounds was 1 min. 54 secs. in the two-gun, and 1 min. 23 secs. in the one-gun turret. In the *Minotaur*, with a gun's crew of sixteen men, the mean interval between the rounds was 1 min. 7 secs. only. The shortest interval between any two rounds in the *Royal Sovereign* had been 1 min. 17 secs., whereas it had come down to 59 secs. in the *Minotaur*. The target in both cases was a small one, and 1000 yards distant.

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[1] The argument would now probably hold that a ship so disabled would be either rammed or torpedoed if she did not haul her colours down.

It was claimed on the side of the turret system that greater elevation, and therefore greater range, could be given to guns in turrets than to guns in broadside ports, but it had been found that the 12-ton guns mounted on board the *Minotaur* experimentally gave as great elevation as those mounted on board the *Royal Sovereign*.[1]

The necessity for clearing the upper-deck for action would always be a disadvantage in a sea-going turret ship.

The nearness of the deck to the sea in the *Royal Sovereign* was an inconvenience, and made the accommodation on board her, as a ship to live in at sea, bad.

The captains of the turrets, being the only men exposed to the enemy's fire, would be liable to become unsteady.

There was no practical reason why a heavy gun should not be worked on broadside as well as in turret.[2] But the advantage in the turret, of commanding such an extent of horizontal training, was of far greater importance than any one of the advantages inherent in the broadside; the question for consideration was whether it counterbalanced the disadvantages.

For harbour defence, short voyages, or attacking a fortified position, the turret system would prove of great value; but Captain Key did not consider that we could retain that superiority at sea, which is necessary to our existence as a first-rate Power, if we armed our fleet for ocean service in all parts of the world entirely on the turret

[1] This point was really an accidental one, and did not affect the main argument. Special arrangements were made in the *Royal Sovereign* for giving great elevation, but then with disabilities which did not exist in broadside mounting.

[2] This was the main argument pro or con. Captain Key's mind had undergone a rapid change on the subject, as we shall presently see, by the course of experiments carried out.

system. This inferiority, under the varied circumstances in which a ship of war must necessarily be placed, would prove to be very decided. In any case, he recommended that turrets should always be designed to carry two guns instead of one, as the increase of weight would be small in proportion to the increase of power.

This limited opinion must scarcely have pleased anyone when most men were hot partisans on the one side or the other; but time has more than justified it. The *Royal Sovereign* type was never repeated, was not repeated by Captain Coles himself when his hands were free; and in the end the turn-table system of mounting guns, only takes part jointly with the broadside system in certain classes of ships.

When Captain Key made this report he was in a very good position to form a sound judgment on the whole question, for he had just completed the trials of the rival broadside system of mounting 12-ton guns in the *Minotaur*. We have seen that early in 1864 he had reported that a 6½-ton gun was the heaviest that could be efficiently worked on the broadside, and that in July 1865 he was, after experience with the 12-ton gun both on broadside and turret mountings, and knowing that a 22-ton gun was under trial, entirely reversing the former opinion, and not drawing the line at any weight of gun as incapable of being worked on the broadside. The fact, of course, was that when the mounting of heavy guns in turrets came to be considered, an open mind was necessary, for the old methods could not be applied. When mounting guns on the broadside was to be considered, very few men could shake themselves clear of the old methods, and the desire to cling to them hindered advance. The tradition of simplicity, and the consequent dislike of machinery for working guns, were strong in Captain Key's mind, and he only shook them off under the conviction of experiments which were forced upon him. No authority seemed quite to realise that if these very heavy guns were to take their places on board ship, simplicity must go, and machinery must come in. The theory that simplicity must be preserved because of danger from the enemy's shot to machinery, or complicated arrangements in the gun mountings, applied all round. Possible enemies, if they were to meet us with guns similar to those we were introducing, would be driven to the same complexities of mounting that we were, and would be open to the same damage by our shot that we were open to by theirs. But this argument never appeared; so the struggle to maintain the old methods of working guns with removable tackles, blocks, ropes, and handspikes, as against irremovable racks, and pinions, cogged racers, and chains, went on, but always losing, until, as now, they had wholly disappeared.

Early in September 1863 Captain Key, while admitting the experimental success of a garrison carriage with cast-iron flanges, shows himself afraid of the latter on account of possible splinters from the enemy's shot. A few days later he was not prepared to offer suggestions for mounting heavy guns, for want of data. Yet a few days and he concurred in resuscitating "Marshall's carriages," of which the record in the *Excellent* was just thirty years old, and at the same time he seems to have made up his mind that slide carriages were inevitable for the coming guns. At the end of October he confirmed this view, and early in November he got so far from rope as to recommend that the strops of the gun-tackle blocks should henceforth be of wire instead of hemp. At the same date he felt bound to point out that, in adopting Marshall's carriages, we should adopt the plan of fixing the guns in ports so that they could not be transported. By the middle of January 1864 he had concluded that it was necessary to employ wrought iron instead of wood for the material of the carriages; and he again enforced the view in a week's time.

There were just now, Armstrong, the Royal Carriage Factory at Woolwich, Lieutenant Roche of the navy, Mr. Cunningham late of the navy, and Commander R. A. E. Scott of the navy, all at work on new ideas and plans for mounting and working heavy guns; while in the *Excellent* they were modifying, by slow and cautious experimental steps, the old arrangements with which the staff was familiar. The question had become, and was to remain, the most difficult and troublesome with which Captain Key had to deal. There was more correspondence over it, and, as it turned out, more administrative friction, than over any other single question. There was an infinite clash of principle and detail, out of which real progress was very slowly evolved, and the disjointed character of the organisation which had the matter in hand only made itself more and more manifest as time went on. The story of arranging for the use of the guns on board ship, which gun designers so easily turned out as soon as Armstrong had shown the way, is the story of trouble and difficulty.

In January 1864 Captain Key was startled to learn that, without in any way communicating with him, or possibly with any naval authority, the War Office had authorised Armstrong to make experimental guns and carriages for the naval service. Almost at the same moment mistakes by the Gun Factory and the Dockyard drew from him a remonstrance. He thought Roche's plan for carriages in the *Royal Sovereign* promised well, and that with modifications the slide and carriage made for experiment with the 6½-ton smooth-bore gun might answer. He conferred with the head of the Royal Carriage Factory as to mounting the 12-ton gun, deciding on wrought iron. By the 20th of February he had not yet got a service carriage for the 6½-ton gun. On the 22nd he considered a plan by Mr. Cunningham of a revolutionary character, namely, the application of steam power direct to the working of heavy guns. He condemned that, and likewise the application of rigid bars to heavy guns, but he thought there was something in the idea of taking the falls of the gun-tackles to revolving shaftings—a plan in everyday use in the dockyards. But whether or not, he recommended that Mr. Cunningham should be put in official communication with the Royal Carriage Factory, in order that the matter might be thoroughly investigated.

It was on the 23rd of February 1864 that he first expressed an opinion on the method of mounting proposed by Commander Scott. The plan involved the use of wrought iron instead of wood throughout; the use of permanent rollers, of powerful compressors, of racers and rollers so arranged as to keep the slide secure without the necessity for a "fighting bolt." Captain Key necessarily approved of the wrought iron; he did not like the rollers, nor the system of racers, but the system of compressors was worth a trial. The whole plan was a development of what had been devised for working the heavy cast-iron guns of the United States navy, but it was singular that Captain Key did not recognise the possibilities of its still further development in Captain Scott's hands. There was found to be great difficulty in so securing "fighting bolts" to stand the shock of the heavier charges, and Captain Key had only the day before been writing about it. A substitute might have been more welcomed than it was.

By the middle of March 1864 the mountings for the 6½-ton gun were as far off as ever, and Captain Key was giving the Royal Carriage Department infinite details of the requirements; but something had been done by the Admiralty in the way of securing the fighting bolts, which promised well. In a few days Cunningham was bringing forward a plan for compressors, which Captain Key thought ought to be quickly made and tried.

Differences of opinion between the Controller's Department at the Admiralty and Captain Key began to show themselves by the end of March 1864, the former being, as Key thought, too ready to plunge into new arrangements without sufficient trial or data. It was, he wrote, undesirable to introduce additional mechanism for working guns on board ship, until it was found in what respect an extension of our present means was insufficient. Additional controlling power would be necessary for the new guns proposed, in a sea-way, but nothing could be known without experiment, and a 12-ton gun as well as a 6-ton gun should be tried on board some ship on the home station at sea.

There seems to have been still a desire on the part of the Royal Carriage Department to adhere to wood as the material for the new carriage, for as late as the end of

April 1864 Captain Key was urging that department to get out a plan for wrought-iron carriages for the 6½-ton gun, and to send it to the *Excellent* for consideration when matured. He presently forwarded descriptions and reports of all the carriages which had been supplied at various times for trial with the 9.2-inch smooth-bore of 6 tons and the 7-inch rifled gun of 6¾ tons, and detailed the improvements which had been and could be made in them. Every alteration adopted had been an improvement, and the fighting bolt difficulty had been met by building it into the ship's side. There was, with these latest advances, no difficulty in working 6½-ton guns in a gunboat rolling from 10° to 20°. He asserted now, with confidence, that such guns could be worked in a sea-way with proper appliances and ordinary care. The chief constructor at the Admiralty was meeting a difficulty by a new arrangement of pivot bolts. When one port was fitted with it, it should be experimented on before others were proceeded with; but on June 4th Captain Key wrote, promising to presently bring forward the whole question of pivoting revolving slides. On June 16th he forwarded suggestions for improving the running in and out of the 6½-ton guns.

But though there was this continued improvement, and though Key was thus sanguine that the question of working 6½-ton guns on the broadsides of our ships would be met, we were a long way from perfection. There was really no efficient system of compressors to control the recoil of the gun when fired. Cunningham, Scott, Armstrong, and the Royal Carriage Department were all at work on the fundamental difficulty, but by the end of June 1864 nothing was yet complete. Captain Key pointed out that what was desired was a system of compression to control the recoil of heavy guns, which should be self-acting, simple in mechanism, strong and endurable in its various parts, its action allowing the gun to come in sufficiently for loading, but capable of adjustment according to weather and other circumstances. If these objects were secured, weight of gun need not be added to check recoil.

Captain Key was hitting the real point when he asked for self-acting compressors. It does not seem to have been before mentioned. The most perfect system of drill could not secure that a compressor would always be fully set up before the gun was fired, and there was no end to the danger when the precaution was omitted. Armstrong immediately took up the idea, and, as is well known, all systems of compression afterwards were made automatic, that principle lying at the bottom of the success which has attended the mounting of guns of almost unlimited size afloat.

At the end of November 1864, Captain Key thought that he had had experience enough to review the whole question of gun-mounting. The system of slide carriages must be adhered to; the material must be wrought iron, and he gave full details to govern their nature and construction. The axis of the guns should be 3 ft. 7 in. above the deck, and carriages and ports should allow of 15° elevation and 6° depression. The best form of compressor was Sir William Armstrong's self-acting clamp, but many changes—which he named—were necessary in its application. He felt strongly that we should continue to work all guns by tackles as far as it was found practicable.[1] Machinery, he thought, was likely to get out of order by heavy concussion or other accident. It could not be repaired in action like the replacing of a side tackle or a breeching, and no arrangement of any wheels would enable us to work heavy guns with that rapidity which naval officers would always consider necessary for efficiency.

Cunningham and Scott were, at this time, both advancing in the substitution of rigid machinery for flexible rope in working the heavy guns, and Captain Key, no doubt, had them in his mind; but as time and experience went on, he was driven from his position.

Just at the end of the year 1864, suitable wood and iron carriages and slides for the 6½-ton guns, whether smoothbore or rifled, seem to have been provisionally adopted. They were fitted with the new Royal Carriage Department compressors, which were an improvement; though Key still thought the Armstrong plan was superior.

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[1] The French, as I have already mentioned, adhered to the use of tackles for even 22-ton guns mounted on the broadside, at least to the year 1881, long after we had given them up.

It might have seemed that, so far as the 6½-ton gun was concerned, the mountings were fairly settled by the beginning of 1865. It was intended to be so, and guns and mountings were supplied to the new ironclads *Hector* and *Achilles*. But here the disjointed nature of the organisation came in. The guns in these ships were no sooner put under test than the arrangements were reported against, and Captain Key, on investigating the matter, found that different arrangements in several essential particulars—arrangements which he had either never seen before, or had reported against—had been introduced by the independent authority of the War Office. He was forced to say how undesirable it was that the War Office should adopt any fitting as a service fitting until it had been thoroughly tried afloat, and approved by the Admiralty.

To us, at this date, it is almost impossible to understand how such things could happen. But the explanation is the reflex action of tradition. The War Office was only continuing to do what the Board of Ordnance had done for centuries. But in early days the plan was congruous, and it was now utterly incongruous. In this case it was the more provoking and startling, as Captain Key had, only a few days before, extracted a promise from the War Office that it would in future take care that no changes in mounting should find their way on board ship till they had passed through the *Excellent*.

On the 3rd of February 1865, Captain Key pointed out that the line Commander Scott was taking in following American models of gun mountings did not sufficiently recognise that no safe conclusions could be drawn therefrom, as the American guns were very heavy with very low charges, when we were reducing weight in proportion to the charges. This was especially the case in regard to the compressors, which, indeed, he understood the Americans were abandoning.

Later, in February, the War Office justified their independent action in the mounting of the *Hector's* and *Achilles's* guns, but Captain Key repeated that it was undesirable that the War Office should adopt anything as a service naval fitting until after it had been tried afloat, and approved by the Admiralty.

Meantime, the Royal Carriage Department had introduced into the navy its own compressor, without naval approval. Key now had it for experiment, and reported that, though it was superior in handiness and compactness, it had not the power over the recoil which the old compressor possessed. He recommended that all the compressors supplied to H.M. ships thus without approval should be withdrawn. He dwelt again upon the point of automatic working, and said that, in close action, instances would frequently occur of the gun being fired before the compressor was set up, and the carriage might be disabled in consequence. He anticipated very good results from Sir William Armstrong's automatic compressor, which was now under trial.

At the end of February, Rear-Admiral Symonds[1] appeared amongst the inventors of gun mountings, and on his plans Captain Key declared that he was prepared to modify his opinions against machinery for working heavy guns; and a fortnight later, on another inventor's plans, he spoke of the importance of adopting some mechanical means for training guns on the broadside. It was the open mind being acted upon by the logic of facts.

In a report on American ordnance towards the end of March 1865, Captain Key could not forbear to notice the advantage the American navy possessed in having the entire control of its own ordnance in the hands of one officer under the Secretary for the navy. His remark had this much point in it, that he was about to report, and did so next day, that the War Office gun carriage, just completed, ostensibly as the *Excellent* design, differed, and differed wrongly, in many ways from it.

Meantime, the 6½-ton smooth-bore gun, admittedly imperfectly mounted pending improvements, had been supplied to several ships in the Channel Fleet on trial. The reports came in in the middle of June 1865, and, though an efficient self-acting compressor had yet to be designed, the results in the fleet had been more satisfactory than could have been expected. We thus stood at this time with an advance to the 6½-ton gun on board sea-going ships, while the 12-ton gun was being mounted experimentally in the *Minotaur*, and it might be found fit for service by the time she was commissioned.

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[1] Son of Sir William Symonds, the improving Controller of the navy in Captain Key's early days. Died admiral of the fleet and G.C.B. in 1894.

By the middle of July, Commander Scott's carriage, greatly improved and developed, and now constructed of wrought iron for the 100-pounder 6½-ton smooth-bore, had been tried for comparative results. Captain Key reported that the gun was more rapidly worked by nine men with Scott's carriage than by twelve men with the service carriage, but then Scott's men were better trained. Key said the advantages of Scott's carriage were manifest, and parts of it worked with ease, but more trial should be had before final opinion could be pronounced. Three months later, it was clear that more training was required for men to work Scott's carriage efficiently than to work the service carriage.

By October, a plan devised by Mr. E. J. Reed, the chief constructor at the Admiralty, for working the broadside guns of his new ship, the *Bellerophon*, was ready for trial. The principal object of it was to keep the greater part of the gun's crew below deck. Captain Key disapproved of the leading idea, as likely to affect the *morale* of the men in action; and he did not see that any advantages were gained in working the 12-ton gun, over those then being developed in the *Minotaur*, where it was found that the fourteen men allowed for working the 95-cwt. 68-pounder could now work the 12-ton gun.

The Armstrong self-acting compressor was now complete, and Key thought very highly of it. It was similar in principle to that used in the U.S. navy, and by Commander Scott; hanging plates running from end to end of the slide being gripped and compressed by other plates attached to the carriage. But in Armstrong's plan the power was applied by the gun itself in recoil. The plan, Key thought, was capable of general application, and should be at once applied to the carriage Sir William Armstrong was preparing for the 12-ton gun.

By the 27th of November 1865 several experimental mountings for the 12-ton gun were ready for trial in the *Minotaur*, which it was arranged Captain Key should take to sea, and, if possible, find severe weather sufficiently rough to put them to the test. It was only now, perhaps, that it began to be recognised that the enormous size of the new ships was diminishing the force of the fears about the effect of a sea-way. The difficulty of finding a sea-way that would move the *Minotaur* had to be thought of, and Captain Key wrote to point out that he might have to make Portland her port of departure in order to get it. It seems that it was not till 5th February 1866 that severe weather arrived, and then the *Minotaur*, going to sea in a gale, could only be got to roll 10°.

It was not till the 14th of May 1866, and after experiments in the *Bellerophon* as well as in the *Minotaur*, that Captain Key was able to record his final opinion upon the various mountings for the 12-ton gun which had been before him. It was evident that the original conceptions as to difficulties of mounting and working heavy guns on the broadside had all passed away in the course of experiment, and improvements dictated thereby. In March, Captain Key had recorded his opinion that guns of greater weight than 12 tons could be so mounted and worked, and now, amongst the several systems of mountings, it was no question of success or failure. They had all succeeded; some were better in one respect, some in another; and while no arrangement was absolutely perfect, if all the good points could be brought together in one design, the result promised every satisfaction. Captain Key took his general stand on the opinions expressed by him in November 1864, which urged simplicity and no substitution of rigid machinery where ropes and tackles were found efficient. The Armstrong slide and carriage should be taken as the basis, Scott's running in-and-out gear being added. Scott's proposals, as a whole, were highly reported on, but as they stood they were too complicated for general service. The work of the Royal Carriage Department was least to be commended; but this was not to be wondered at, as all ironwork for gun carriages was new to it.

The 12-ton gun, whether rifled or smooth-bore, was thus finally launched under Captain Key's auspices, and he had superintended and guided the increase in the weight of the gun from the 4¾-ton 68-pounder. His influence had always been moderating. As he saw his way, he had entered fully and cordially into the development; but in no case had he allowed himself to be carried by storm, as most men of his day were, either in resistance to all movement, or in leaps forward into bogs and marshes out of which return was difficult.

All through these changes the really undefined position of the captain of the *Excellent* had been producing increased friction. There was, as we have seen, eternal collision with the different departments under the War Office, which were met by Captain Key with entire frankness and firmness, but with imperturbable good-temper. Growing difficulties with the Controller's Department at the Admiralty were more trying and harder to manage, as, properly speaking, all the responsibility for the armaments of our ships, as part of the ships themselves, rested on the shoulders of the Controller, and yet, as regards his department and that of the *Excellent*, they were each fighting for their own hand before the Board of Admiralty.

Every now and then, and, as time went on, more frequently, Captain Key found that, unknown to him and quite apart from his judgment, whole armaments of ships were settled between the Controller's Department and the War Office, and he was left to accidentally discover it by reports reaching him from the officers of the ships complaining of what had been done. In other cases, his opinion was asked on changes which had been actually made without his knowledge. Every report he felt it his duty to make on these occasions were necessarily bones of contention between the *Excellent* and the Controller's Department; and it was inevitable that antagonism should arise, and should grow. The remedy was obviously that which was applied later, namely, creating at the Admiralty an ordnance branch of the Controller's Department, and placing at the head of it a high officer who would be the subordinate of the Controller, but having the captain of the *Excellent* as his subordinate in all matters relating to material. But this was not to be yet, and a kind of exasperated antagonism grew up in the Controller's Department against the *Excellent*, but most specially against her chief.

There were a thousand points of possible collision as it became more and more certain that gun carriages, instead of being loose movable structures capable of being used in any port, were henceforth to be fixed in the particular port which was adapted to them, with special pivoting bolts and deck racers—all part of the ship's structure. Where the War Office work began and the Controller's ended in these cases, no one knew, but the captain of the *Excellent* came in as one interfering between a married pair, and was misunderstood and condemned on both sides. The Controller's Department read into Captain Key's letters complaints against the dockyard officials which were not there at all, and long explanations to this effect from the captain of the *Excellent* were no more effective than such things usually are.

Then, when in the simple course of his duty, and with all the advantages of his expert position, Captain Key criticised the Controller's proposals for the armament of particular ships, it seemed as if he were stepping out of his way to make difficulties. He had to defend himself by declaring that his intention had ever been to afford the Controller's Department all the assistance in his power, and the Controller might be assured that he would never willingly throw difficulties in the way of his fulfilling his arduous duties. He could only do this by expressing his opinion clearly and decidedly on points connected with his own duty. No department could furnish the *Excellent* with better information than she had herself. Her captain's duties were entirely undefined, and he was only responsible for the opinions he gave. He was constantly asked questions respecting armaments by the dockyard officials, and when he did visit ships with this object he invariably found mistakes, either in the position of guns, size of the ports, amount of training, mode of pivoting, or in the fitting of magazines, etc. He generally pointed these things out to the dockyard officers, and was generally told that these points were arranged by the War Department, so he was inclined to give the matter up in despair. He would be very happy to carry out any arrangements that might be come to in regard to his communications with the Controller's subordinates. He did not want his opinions to be considered confidential. He offered them for his superiors, to treat in what manner they thought most for the good of the service; and he was quite satisfied that they should be put on one side if they were found to be erroneous.

This defence of his position and conduct was offered by Captain Key near the close of 1865, but it was far from leading towards a better understanding. In fact a better understanding was not possible, because of the oldness of the bottles into which the new wine was being poured.

There was a rankling and a growing sore that for a long time Captain Key had been rubbing without knowing that it existed. Early in 1864, Commander R. A. E. Scott, as already mentioned, had brought forward his plans for mounting heavy guns. Captain Key and the officers of the *Excellent* had at best supported them with limited warmth, and had never committed themselves to proposing their adoption in every detail. But from some early date the Controller and his department had seen in the entire adoption of Scott's plans a solution of all the difficulties by which the gun-mounting question was surrounded. Thus every limited commendation that came into office from the *Excellent* seemed to be the expression of a hopeless antagonism, and in the mind of the Controller placed the captain of the *Excellent* and Commander Scott in personal rivalry, in which the latter was to be supported at all hazards.

In the middle of July 1866 a letter from Devonport unofficially informed Captain Key that, in the cases of the new ironclads, *Ocean*, *Zealous*, and *Achilles*, alterations in the mode of traversing and transporting carriages and slides, proposed by Commander Scott, were ordered to be carried out. These fittings differed entirely in principle and detail from those established after such long and careful experiment. Key presently learned that Commander Scott had been appointed by the Admiralty to assist the Controller in gunnery fittings. This was a climax, and Captain Key spoke out.

It had been the custom, he said, since the establishment of the *Excellent* for the instruction of officers and seamen, to refer all questions connected with ordnance and armament fittings for the opinion of her captain, in order that he might afford the Admiralty the benefit of his experience and that of the officers of the ship as to the effect any alterations might have on the instruction of our men in the exercise of the guns, and the efficiency or otherwise of the proposals as regarded the offensive power of a ship's armament. The mode of proceeding seemed to have been wisely adopted, as a uniform system is a necessity for the efficiency of our fleet, and the opinion of those whose attention is closely directed to one point cannot fail to be of some service.

Captain Key certainly deprecated the idea that the opinion of the captain of the *Excellent*, or any other subordinate, should be considered in any way as final; the decision must, of course, in all cases rest with the Board of Admiralty; but, so long as an officer in this position retains their Lordships' confidence, his opinion, Captain Key assumed, would be sought for. If the system is abandoned, it was evident that the captain of the *Excellent* no longer retained their Lordships' confidence.

Captain Key had, in his present position, been employed for three years—in addition to his ordinary duties—in the endeavour to improve the mode of working heavy guns on the broadsides of our ships, and to introduce a system for working guns of much greater weight than had been contemplated. His endeavours had been mainly assisted by the able and experienced officers of the ship; and though at this time the armaments appear to be in an inextricable state of confusion, owing to the expedients which we had been obliged to adopt for immediate service, the experiments and careful consideration of the past two years had now placed us in a position to decide for the future, and to adopt a system of guns, ammunition, shells, fuses, carriages, and slides, combined with the instruction and exercise necessary for the efficient use of these weapons, which, he believed, would place us much in advance of any foreign Power.

For the introduction of this system one department must be responsible, or we should never extricate ourselves from the confusion existing. Above all, there should be a close communication between the Controller's and Gunnery Departments, or the armament of the fleet cannot progress. He scarcely needed to point out to their Lordships that the arrangements made with regard to Captain Scott would increase the difficulties of his position, and prevent the introduction of one uniform system of armament.

While he deeply regretted the loss of their Lordships' confidence, which such a course indicated, he could not but express an opinion that, unless such an important element in our national strength was retained under the direction of one department, serious disasters must ensue. He therefore most respectfully urged on their Lordships to appoint some officer to fill his position in whom their confidence could be placed; and, while deploring the want of success of his labours of the last three years, and of the officers who had so unweariedly aided him, he begged to offer his services for any post, or command, the duties of which their Lordships might consider him capable of conducting.

Without doubt, this climax was the inevitable consequence of the anomalous condition. At the Admiralty it had not probably been perceived how impossible it would be to maintain two gunnery referees holding opposite opinions, in office; and, of course, Captain Key was so absolutely in the right, and was known by the whole service to be so, that there was nothing for it but to smooth over the difficulty, and to consider some fresh arrangements which might get rid of the anomalies.

In his letter of remonstrance and resignation, Captain Key had specified ammunition, shells, and fuses as matters with which he had had to deal in addition to those leading developments of guns and their mountings which have been shown to occupy so much of his thought. As a fact, the subsidiary questions to be dealt with daily were almost infinite in their number and variety; and the difficulties in dealing with them were quadrupled from the disjointed character of all ordnance administration, and the number of separate authorities who had to be convinced before anything could be done. A mere glance through the classes of subjects dealt with is sufficient to show the enormous amount of thought and work involved, and the hopelessness of keeping up in actual practice with the theoretical spirit of progress that was abroad.

Apart from guns and their mountings, and the trials of armour-plates, we have fuses, rockets, sights, friction tubes, bolts for armour-plates, target ships, backing for armour-plates, fire screens, obsolete gear, cartridges, shell boxes, shot plugs, shrapnel shell, fixed floating batteries, small arms, hollow shot, muzzle disparts, pistols, magazines, handspikes, photographs, submarine guns, breech-loading rifles, shell extractors, case and grape, boats' magazines, explosive bullets, high-angle fire, sponges and worms, shot supply, cutlasses, gun drill, steam launches, submarine attack, life-saving, gunnery books, electricity, light-balls, lighting decks in action, bugle signals, protecting rudders, manœuvring powers of ships, special gunboats, armoured decks. Such a list as this gives some slight idea of the enormous catalogue of subjects which came under his ken, and the progress or condemnation of which fell under Captain Key's influence. In all these minor subjects the treatment he gave to them was governed by those rules which he had set up as captain of the Steam Reserve at Devonport. He was always for the medium course—he was always for simplification; for the weeding out of what was obsolete; and for the endeavour to make one thing do the duty of two where it was possible.

But amongst this list were great questions where he was the originator, and where that fact is altogether forgotten by the service. In the matter of small arms, for instance, he was, as early as May 1864, urgent for the adoption of breech-loading rifles for the navy, without waiting for any concurrence by the army. He reported most favourably on the advantages of the Montstorm rifle, and suggested how its defects might be remedied. In August the only defect remaining in it was the large proportion of miss-fires. In October the only defect was its want of accuracy, but he declared it was accurate enough for the navy, and it ought to be adopted on account of its general advantages. In November he was ready to fall in with other views in regard to the Burton rifle—evidently looking to get some breech-loading rifle for the navy without delay. In December Westley-Richard's rifle came into notice, and he thought the real point was to compare it with Montstorm's. But the army question hindered. Nothing was done; and in April 1865 he urged that something should be done. Nevertheless, the matter dragged on. For the navy it was not one of heavy expense, and the point was to get a sufficiently effective weapon without delay. For the army it was a fundamental question, and it was held that the navy should wait. By May 1866 the competition was between the Remington and the Snider; and the economy offered by Snider's system, as existing navy rifles could be adapted to it, gave it great weight. Nevertheless, in Captain Key's opinion, as the delay had been ostensibly to get the most efficient weapon, the Remington should not be put aside on that account. But in July there was a great conversion of Enfield rifles to the Snider plan ordered, and yet that rifle had never been tried on board ship, or in a seaman's hand. The final decision seems to have been come to before Key left the *Excellent*, but he scarcely had a voice in it.

The value of high-angle fire, which is now so well understood, seems first to have been drawn attention to by

Captain Key. He had made careful experiments with mortar practice, and had ascertained that 20 to 31 per cent. of the shell fired would strike the *Royal Sovereign* at 1800 yards, and a much larger proportion at shorter ranges. He desired, in August 1864, that the attention of the Fortification Department should be drawn to the facts.

Captain Key was keenly alive to the possible development of submarine attack. The subject had been brought into great prominence by the American Civil War, and many proposals for dealing with it were put before him. A submarine rocket, which Captain Key called "a locomotive torpedo," attracted much of his attention in November 1864, but an "elaborated spar torpedo" was not thought worth trial in February 1865. A plan of a submarine gun, submitted later in the month, he did not think feasible, but he could not "condemn the notion of submarine guns and torpedoes," though he did not think it would be advantageous to "construct vessels which could be applied to no purpose, and with which our men could not be exercised till war commenced."

It is probably little known that Captain Key was the originator of the *Staunch* class of gunboat, but he appears to have been.[1] In January 1866 he pointed out the necessity of making some arrangement for easily trying heavy guns in a sea-way, and proposed that a gunboat should be fitted for this purpose, to carry the gun in the bow. But then he went on to draw attention to the efficient protection that a flotilla of small vessels, smaller than our gunboats, each armed with a 9-inch M.L.R. gun, without armour-plates of any sort, would afford to Spithead at a very small cost. They could spread themselves over the shoals, and, while each of their shot would tell on an enemy, they would be very difficult to hit at 2000 yards distance. If sunk by a chance shot, the crew could escape in their boat, and the vessel could be raised at any future time.

In this proposal Captain Key took the limited strategical view which most men took at that time, and which many men still hold to. It did not occur to him that before such vessels could be called into action, there must have been imperial collapse, and possibly, if not probably, nothing to defend. But he must have communicated his views to his friend Mr. George Rendel of the Elswick Ordnance Company, for at the end of the ensuing March he enclosed to the Admiralty the plans of such a vessel as proposed by Mr. Rendel, and recommended their adoption. The result, as is well known, was the *Staunch* class of gunboat, and the provision of a considerable number of them for coast defence.

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[1] Unless Mr. Rendel may have influenced Key's mind.

It was certainly a surprise to me to find that Captain Key was the originator of the system of armoured decks, especially as largely adopted by the French, and in our own cruisers of the *Aurora* class, but it does not seem to be doubtful. He raised the question on 15th May 1865, and, asking for experiments with 1-inch horizontal armour, he supposed that shot would be deflected by it if the ship were not rolling heavily. The importance of such a protection, he said, if it were found effective, would be that an armoured belt of great thickness, extending from a little above the water-line to four feet below it, would, combined with the plated deck joining its upper edges, render the ship unsinkable, and effectually protect all her vital parts. Correspondence followed, and trials of deflecting plates were made, which, proving successful, led to the adoption of the plan in many varied forms.

It was one thing to be instrumental in carrying out the change in armament from a larger number of lighter guns to a smaller number of heavier guns; it was another thing to arrange in what positions these guns ought to be carried on board the ship. We have seen Captain Key accepting the argument in favour of the turret system, that the wide arc of training gave to the turret ship a power of placing herself in regard to an enemy's ship with broadside guns only, so as to have the latter at a disadvantage. This involved the tactical question directly, which the change in the character of the ordnance only involved indirectly. Was the abstract question of any value? Was it possible for the turret ship to avail herself of this advantage, supposing it existed? It was hardly possible to avoid asking the question. Captain Key may be said to have turned it over in his mind, but he does not appear to have thought out the fundamental tactical propositions any more than others of his day.[1] It is both useful and interesting to note what he said upon the subject.

The first time since 1850 that we meet his opinions on this head is in September 1863, when he says that it is "of very great importance" for armour-clads "to fire in fore-and-aft direction, and every direction, under cover"—a general proposition which, of course, was understood to be balanced by the question of the proportionate sacrifice that might have to be made for it. The question does not appear to have been raised at all in 1864, but in October 1865 he urged the necessity—in a particular ship—of having "*some* protection to the bow and stern, if attacked in these positions by an armour-plated ship." In January 1866 he recommends that broadside guns, which are to act as chase guns—the plan to be adopted in the *Hercules*—should have twenty or thirty additional rounds of ammunition. In April his opinion was asked on a bow and stern armament proposed by the Controller's Department; he could see many objections, but could not suggest a remedy until the entire plan and armament of the ship was before him. In the same month he commended a plan adopted in the *Favourite* of commanding bow and quarter fire from battery ports. It is not, however, till the 27th of June 1866 that we have a full expression of opinion in favour of powerfully arming the bows and sterns of ships, and his reasons for that view. Difficulties, he said, had been found in bringing a gun from the *Royal Alfred*[2] to bear on the *Bellerophon* and on the *Royal Sovereign*[3] during the late experiments,[4] which showed the necessity of arming the extremities, especially in armour-clads, with few heavy guns. In single action it was very desirable not to allow an enemy to rake the ship with impunity, as many circumstances might arise to prevent the broadside guns being brought to bear on her; but in a general action it was a point of vital importance. It might be assumed as certain that in a general action a ship would be almost constantly engaged with two adversaries at once; she would therefore, while engaging one opponent on the broadside, find another taking up a position on her quarter, bow, or stern, or wherever a point of impunity could be found. This point of impunity should not exist: a ship could not be considered to be effectually armed unless she could bring at least two guns to bear on every point of the horizon, either by training them in the ports in which they are carried, or by readily traversing them to other ports. The *Royal Alfred* and *Hector* were quite incapable of coping with a second ship in a general action which might have selected any point for attack more than 30° before or abaft the beam, as they had no bow or stern guns. Attention was necessary to these points, to enable a ship armed on the broadside system to compete with one carrying her guns in turrets. The principal advantage of the latter consisted in enabling each gun to be brought to bear on nearly every point of the horizon. The advantage of the former system should be that guns *were at all times pointing* in every direction: if this were lost sight of, ships armed on the broadside must gradually give place to turrets.

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[1] Or than he had done in 1850. See p. 216.

[2] Presumably at anchor.

[3] Presumably at the same time.

[4] When the *Royal Sovereign* was fired on.

These were the arguments which carried the navy with them. They, of course, strengthened the position of the advocates of turrets; but they also set Mr. (afterwards Sir Edward) Reed to carry out the principle in the *Iron Duke* class and the *Sultan*, and no doubt induced that absolutely complete adoption of it in such ships as the French *Devastation*, and in our purchased ships *Belleisle* and *Orion*. It was a very small step from these arguments to minimise the value of the broadside guns altogether, and to exalt the value of "end-on" fire, as was done later in the *Inflexible*.

But though the arguments carried all this weight, and are perhaps almost to this day thought sound, it must not be forgotten that those on the other side were not stated. In the first place, all experience was against them. It was obvious that if they applied at all, they must apply with greater force to sailing than to steam vessels. It was a question of mobility. If the one ship or the two ships had powers of placing themselves as described, was the ship attacked compelled to maintain for an instant her disadvantageous position? Were not her powers as a sailing ship to move out of such a position immeasurably less than they were when she was a steamer? Yet the wars of a couple of centuries had never raised the question in regard to sailing ships, and the bows and sterns had always remained unarmed. Two steam battles had been fought,—the battle of Heligoland, and the duel between the *Alabama* and the *Kearsarge*,—and in neither was the question raised. A month after Captain Key wrote, the battle of Lissa was fought, and still the question was not raised. The battle of Yalu has since been fought, where, if the question has been raised at all, it has condemned all sacrifices for the sake of "end-on" fire.

But, then, was it logical to raise so important an issue without experiment? Was the obvious fact that an ordinary broadside ship could not engage a ship ahead and astern of her if she were deprived of motion, or was without springs on her cables if at anchor, a good argument? Was it not at least necessary to show on paper that positions of ships, or fleets, could be taken up as suggested, and could not be counteracted by movements on the other side? Doubtless, there was breadth in such an argument, but it might be said that it wanted depth; and if so, it was characteristic of Captain Key's mind, as that of an administrator dealing with the practical wants of the moment, rather than of the philosopher dealing with causes and effects which were fundamental.

Captain Key, however, had no idea that his arguments would become the base of an *Inflexible*, nor did he desire to exalt in any way the power of bow and stern batteries to the disparagement of the broadside. Not long before he quitted the *Excellent*, in August 1896, he put on paper a résumé of his ideas of warship design, which afterwards, when he went to the Admiralty, was, or became, the essence of the plan upon which the *Collingwood* was built, and therefore the basis of the great battleship fleet which followed her.

He was of opinion that too much importance had of late years been attached to the following points:—

1. The protection of our men's lives in action from the effect of the enemy's fire.

2. The attainment of great speed in ships forming a fleet intended to take part in a general action.

3. The power of shells in setting a ship on fire to a dangerous extent.

4. The use of a pilot-house or tower for the protection of the captain and other officers.

Regarding the protection of men by armour-plating, he said that it was evident that a small body of men could better defend themselves against the attack of a large number by seeking the protection either of a fortification on land, or thick armour-plates at sea; but it appears also evident that their offensive powers are in both cases similarly hampered. A weak maritime power should therefore construct vessels of great defensive strength, while powerful nations, wishing to command the sea, must look principally to the offensive power of their fleets.

Ordnance that would be used in a future naval war would readily penetrate the *Bellerophon's* side with shell at a thousand yards, her battery being the best protected of any ship afloat.

If shot and shell could penetrate armour-plating to the battery deck, the effect would be greater than if the side were unarmoured, and the damage would be more difficult to repair. Sea-going ships could not be protected at all points with armour of such thickness as would resist heavy ordnance, and hardened projectiles, without a great sacrifice of other qualities.

Naval history taught us that ships were rarely captured in consequence of the number of men killed on either side, but usually by masts falling, or rudder being disabled, the ship thus becoming unmanageable—or being sunk, or carried by boarding.[1]

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[1] I think this is an error. A close examination of the causes of victory in sea-fights shows them to follow proportions of killed and wounded more persistently—except in steam battles—than any other event.

In view of these considerations, Captain Key said he would prefer to afford *perfect* protection to the vital parts of the ship, such as the water-line, the rudder and steering gear, the engines, screw, and magazines, and utilise all other available weight and space by adding to the offensive power of the armament on every point.

Regarding speed in a fleet, he said that the actual speed of a fleet depended on the speed of any ship which might have her tubes foul, or the machinery in any way partially disabled or defective. The line-of-battle could therefore never move at high speeds, that is, above 11 or 12 knots. This was true even when chasing or being chased. In a general action, high speed was of little importance; rapid manœuvring power being of far more value. Great speed could only be ensured by sacrificing handiness, or stowage, or power of armament; each of which was of more importance *in a fleet* than one or two extra knots of speed.

He referred only to ships forming the line-of-battle. A flying squadron attached to a fleet, and cruising for destroying the enemy's commerce and protecting our own, should have as much speed as could be attained. The *Warrior* class formed a squadron of fast ships, but were not suited for line-of-battle. The line-of-battle should consist of ships of about 12-knot speed, of about 280 feet in length, and armed in all points with as many heavy guns as they could carry; all the ships being as similar to each other as possible, both as regards speed and other qualities.

Touching the power of shells to set a ship on fire, he said that he did not wish to underrate the effect of shells bursting in a ship's side or between decks; the moral effect on the men, the inconvenience of the smoke, and the destruction of life must be very serious. But it was generally considered that they would inevitably set fire to a wooden ship, which could not therefore, under any circumstances, stand against them. He considered that if proper precautions were taken to extinguish the fire in every part of the ship without the ship's company leaving their quarters, as had lately been adopted throughout the service, no fire caused by the instantaneous explosion of a shell could gain ground to a dangerous extent.

He had witnessed the explosion of two hundred and ninety-five shells in the *America* and *Alfred*,[1] varying in size from 150-pounders to 20-pounders; and although he generally fired twenty shells without visiting the ship, only in one instance was she set on fire to any extent. This was caused by a shell bursting in the side where a previous shell had splintered the planking. The draught through the aperture produced flame, which was put out with a few buckets of water, although it had been burning for nearly half an hour. An efficient fire-brigade acting independently of the quarters, would obviate all danger of a ship being set on fire by the enemy's shell.

Some of the Lords of the Admiralty had had personal experience on this point before Sevastopol in 1854, and could probably confirm this opinion, which had been formed after closely questioning many officers and men engaged on that occasion.

As to the necessity for a pilot-house,[2] it had been considered necessary to furnish armour-clad ships with a protected pilot-house, which was supposed to afford shelter to the captain and other officers during an action. He was decidedly of opinion that such a provision was not only needless, but harmful. It was not possible to handle a ship efficiently, or to direct a fleet, from such a position; while the risk incurred by a captain was less than formerly. He was now opposed to ships carrying ten guns on their broadside instead of fifty, while a small shot will injure quite as much as a large one, the rapidity of fire being also lessened. He also escaped much of the danger from shells, as there was nothing in the vicinity of the bridge to burst concussion shells, which would be invariably used against ships. He would certainly be exposed to rifle fire, and should be afforded the protection of a rifle screen of ⅜-inch iron in various positions, from any of which he could handle the ship.

He submitted that the weight of the pilot-tower of the

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[1] Two of the *Excellent's* target ships.

[2] Now called a "conning-tower."

Bellerophon—nearly 100 tons—would be better occupied by eight 7-inch M.L.R. guns, which with all their ammunition would weigh about the same; while it was doubtful whether the tower would effectually resist the fire of heavy ordnance.

He was aware that his opinions were at variance with those of a large portion of experienced officers in the naval service. He submitted them with deference, but they had been carefully considered; and, as far as decisive opinions could be formed without the experience of actual warfare, he firmly believed that his views would be found to have an important bearing on future naval actions.

Of course we can see that this did not necessarily follow, because there might not occur any naval actions to be governed by them. But they might immediately govern design; and Captain Key went on to sketch the designs which would suit his principles. He suggested the following points for consideration in the construction of our ships intended to form the fleet which was to command the seas—for he imagined that it could not be disputed that England existed as a first-rate Power solely by her maritime supremacy, which was not to be maintained by a defensive fleet:—

1. Ships to engage in line-of-battle should not be of greater length than 300 feet, in order that they should be capable of rapid manœuvring.

2. They should not be encumbered with engines and boilers beyond what is required to ensure 12½ knots speed at the measured mile when fully equipped.

3. The water-line should be protected by a belt of eight inches of iron, extending five feet below and two feet above her load-line—a deck of 1-inch iron-plating and six inches of planking being placed on a level with, or a little below, its upper edge.

4. The rudder should enter below the water-line; the tiller, rudder, and steering gear, except the wheel, being protected by the belt.

5. The armament on the gun-deck should consist of heavy guns on slides—12-ton guns in the midship ports,

and lighter guns towards the extremities; each gun to train through an arc of at least 72°.

6. On the upper-deck, two guns on a turn-table before the foremast, two others similarly mounted abaft the mizzen-mast. No armour-plates were to be on the turn-tables, but rifle-proof protection afforded to the men. The rollers and training gear to be protected as much as possible by the upper-deck beams and deck. These tables might either revolve inside a bulwark with ports, or the bulwark might be attached to the turn-table.

7. No armoured pilot-house, but various positions on each side covered by rifle-proof screens, affording a clear view ahead and astern, with speaking-tubes to the wheel and engine-room.

As regarded cruising frigates and smaller vessels for the protection of commerce, great speed was indispensable. Many of these vessels might be rendered much more formidable by a water-line belt and iron deck; but he would in no case place armour-plating elsewhere than on the water-line, which should not be of less thickness than six inches. The gunboats for shallow or inland waters should carry one heavy gun, firing ahead; without armour-plating, except against rifles, according to the plan that has been already noticed.

Captain Key, even as early as this, did not see clearly how the sails were to be retained. He did not even then think them of propulsive advantage to the ship; but he pleaded that the training of seamen by means of "a full rig" should not be forgotten.

The historical value of this summary of views on tactics, armament, and design will be seen later on. Its biographical value lies in its adherence to those characteristics we have been so long noticing, namely, the utterance of ideas which are generally perfectly sound from the administrative point of view, where doing the best under the conditions was the object, but which do not pursue the subject to any further point. He was well in advance of the opinion of his day, but he stopped short at any examination of whither it was being led or going. Perhaps the best example of this is found in the opinion expressed as to its being better to leave the guns' crews unprotected, except from rifle fire, than to try to shield them with armour that could be penetrated. This was an opinion that long held its own, and is only yielding now by slow degrees. It was obviously founded on the idea of ships carrying the traditional armament of a number of guns of medium calibre. It might well be that, so long as such guns could penetrate the armour carried and there were no other guns, it would be better to have no armour covering the gun-deck. But the point was, that if the gun-deck were denuded of armour, the opponent would take out his medium guns and arm himself with a multitude of small guns, whose shot or shell would be far more destructive, because of the increased number of hits on the unarmoured side, than the few hits that penetrated the armoured side from the medium guns.

But in any case, whether this sketch influenced the future, or whether it only forecast the working of the naval mind in face of the facts, it is plain to be seen that it was, in a general way, a sketch of the conditions of things thirty years in front of the writer.

There is but one point more to be touched on before I close this chapter. We have seen the hopelessness of the organisation for dealing with all this flood and rush of change. Captain Key was in perpetual difficulty and conflict with it, and though so well conscious that the matter could only be put right at the large end, he proposed, in November 1865, to transfer the gun wharves at the ports from the War Office to the Admiralty. There was, indeed, every reason for it. The vast mass of the stores laid apart there were naval stores; such factories as existed at the wharves were employed on naval work. It was mere tradition which had left all this in hands other than those of the navy. The thing was, in fact, too patent to be allowed to go through for the time; and when Captain Key was asked, in February 1866, to furnish a more detailed scheme, and could not do more than offer a general sketch as to the personnel and material changes he thought would be necessary, the plan slumbered for many years—till October 1891.

CHAPTER XVI

BETWEEN THE *EXCELLENT* AND THE ADMIRALTY—1866–1879

THIS chapter, though it embraces so long a period, and covers so much change in Sir Cooper Key's surroundings, must yet be touched lightly and briefly in each part, because during the sixteen years he had less influence on the navy, except perhaps in the matter of education, than at any time since his early days. He went from the *Excellent* to be Director of Naval Ordnance at the Admiralty; from there he passed, after a short service in command of the Reserve Fleet, to be Admiral Superintendent of Portsmouth Dockyard; from thence he was removed, under a remarkable cloud, to be Superintendent of Malta Dockyard; he was then brought home to establish and start the Naval College at Greenwich; afterwards he commanded on the North American and West India station and on his return served for a short time in command of the Reserve Squadron in the Channel, and finally passed into the Admiralty in 1879. All these appointments, except that of Director of Naval Ordnance and President of the Naval College, were in the routine, and did not generally call for more than routine abilities or energy. After the Steam Reserve at Devonport and the command of the *Excellent*, the other offices were of smaller account, and must rather in times of peace be taken as rest after previous labours, than as any continuance of the wearing struggle that has been summarised in the preceding chapter.

The necessity for the creation of a Department of Naval Ordnance had long been admitted. Some months before Key left the *Excellent* the matter was debated in the public press, and it was generally assumed that he would be the first holder of the new office. He himself, though upholding the necessity of placing an officer at the Admiralty as Director of Naval Ordnance, deprecated his own appointment. In the first place, although we have seen him so active in the control and improvement of the material of the navy, he used always to let his friends know that his heart was on the sea with his flag up. Over and over again he had, as a captain, enlarged to me on the glories of the active flag at sea, and how the highest object of any naval officer's ambition should be to command a fleet against the enemy. So there was a sense of disappointment in the prospect of a third term of administration in matters of material, though, of course, continuance of employment was welcome, if not necessary, to a man with a family and of small fortune.

But almost obviously he foresaw difficulties peculiar to him personally. It was quite necessary that the Director of Naval Ordnance should be a subordinate of the Controller's Department. The whole of the difficulties with the Admiralty, while he was in the *Excellent*, had arisen from his anomalous position with regard to the Controller; yet it did not seem certain that his intended position at the Admiralty would be as definite as could be wished. He was to be "in immediate communication with the Director of Ordnance at the War Office, the Director of Stores at the War Office, the Controller of the Navy, and with the Board of Admiralty, through the Secretary and the naval member of the Board, on whom devolved the superintendence of gunnery questions."

Clearly, very little could be decided as to guns for the navy, except with the concurrence of the Controller. If the opinions of the Director of Naval Ordnance should differ from those of the Controller, there was really no one to decide but the Naval Lord in charge of gunnery questions, or the Board itself. The office, indeed, was to be changed. The captain of the *Excellent* would be relieved of those difficulties which had beset Captain Key, but Captain Key might chance to be more in the thick of them than ever.

Vice-Admiral Spencer Robinson, the Controller, was a man of a temperament almost the opposite of that of Captain Key. He had a quick temper, while Key's was remarkably even. He was an advanced Liberal in politics, and a very strong politician. Key, as I have said, seldom showed political bias. Robinson was much inclined to stick to his point at all hazards; Key had a remarkably open and yielding mind on all but the few points that he considered vital. Robinson took strong likes and dislikes to men; Key was not a good hater. He must have foreseen that he was about to fill a post that would be in some of its personal relations far from pleasant; and in its official relations delicate and difficult. But to absolutely refuse the post, when the importance to the public service of his filling it was pressed upon him, was not in his nature. He was appointed " acting Director General " of Naval Ordnance on the 3rd of September 1866, with the pay of a Rear-Admiral, and with a paymaster in the navy to assist him as secretary. He was informed that his duties would be " to decide, in personal communication with the Director of Ordnance (at the War Office), all matters of detail connected with naval ordnance, with a view to bring about a speedy decision." He was to " arrange with the Director of Ordnance when it might be desirable that experiments should take place on board ship, as well as at Shoeburyness "; and he was to see " that the experiments were carried out in such a manner as would give the necessary information to the Select Committee. Those points which could not be determined by him and the Director of Stores (at the War Office) would be settled between their Lordships and the Secretary of State for War, and notified officially in the usual way to the War Department." He was to understand that the appointment was only temporary.

As a matter of historical fact, Captain Key's business at the Admiralty was more to see that what had been done went on in the right direction, than to initiate new forms of progress. That had all been done already in the *Excellent*; and the advance from the 68-pounder smooth-bore cast-iron gun on a wooden carriage, the pattern of which was a couple of centuries old, to the 12-ton wrought-iron muzzle-loading rifled gun, on a wrought-iron carriage, worked by machinery, and from the muzzle-loading Enfield to the breech-loading Snider rifle, had really settled the programme for some time to come. It was no step at all after this to arm the *Hercules* with 18-ton guns; it was merely a development of what had gone before. She was not launched until the 9th February 1867, and she was not commissioned till October 1868. More advanced steps, it was true, were being made in the cases of the rivals, the *Captain* and the *Monarch*, with 25-ton guns in two turrets; but, as it has been seen, Captain Key was generally against the principle of both ships, his work and advice on their designs must have been more or less perfunctory. He did not think that guns of so great a size were necessary for the sort of close action he anticipated in any future naval war, and he did not approve of a great reduction in the number of guns in the abstract.

Outside the Admiralty he has left no record of his views on these developments of naval force, and it is much too early to seek to show what went on within the office where he was but a subordinate. In any case the current was setting against him, and perhaps against the majority of the navy at this time, for he must have been consulted on the designs of the *Devastation* and *Thunderer*, which were laid down in 1869, the year he left office—which were developments of the unhappy *Captain* and *Monarch* ideas, with sail power withdrawn, and the size of the four guns increased to 35 tons. The forces that were producing these ships were outside forces, and the development was not as yet in the direction supported by Key in 1866.

But the admiral left behind him a copy of one official document, under date September 1868, which ought to be noticed.

The Ordnance Select Committee had been pressing on the War Office the abstract advantages of a breech-loading over a muzzle-loading system, desiring, apparently, that steps should be taken towards commencing another gun revolution in that direction. The War Office forwarded the report to the Admiralty, and it was referred to the Director of Naval Ordnance for consideration.

Rear-Admiral Key, under date 15th September 1868, submitted the following memorandum to the Board; and the Board, in forwarding it to Sir John Pakington, the War Minister, declared that they "fully concurred" in it:—

> "This report of the Ordnance Select Committee on the advantages of breech-loading 'in an abstract sense' calls for little remark. That the power of loading at the breech has some advantages is unquestioned; but the practical questions are:—(1) Is any one of the known systems of breech-loading, as applied to heavy guns, so efficient as to be worthy of adoption? (2) Has any proved itself sufficiently satisfactory to authorise the experiments that would be necessary to ascertain its merits with guns of 10-inch calibre and upwards?
>
> "Looking at the very good results obtained from our own muzzle-loading guns up to 12-tons weight, both as regards rapidity of fire and perfect safety, as compared with the serious accidents which have happened at different times with the French and Krupp's system of breech-loading, I do not hesitate to answer the first question in the negative.
>
> "With reference to the second, we are met at once by the enormous outlay that would be involved in a satisfactory solution. The breech-loading system is certainly not required for guns of 12-tons weight and under. We should therefore undertake the experiments with guns of 18 tons; and what system of breech-loading and construction should be our starting-point? I do not consider that either the Government or the country would feel satisfied unless the experiments were conducted on the same basis as those for breech-loading small guns, viz. an invitation for universal competition.
>
> "The cost of such a measure puts it out of the question. I do not, therefore, consider that the substitution of a breech-loading system for that now adopted for our naval ordnance should be seriously entertained."

I suspect that, to most readers of to-day, this memorandum and its adoption by the Admiralty will amount to evidence of a conspiracy of obstruction. I think we should be hasty in so concluding. The Admiralty was only just out of the wood, it may be said, in regard to its ordnance. Its control of it had been fitful and incomplete. To reopen the whole matter again must have seemed like rendering the navy again powerless. Every responsible administrator must have desired to suppress further change.

But the justification is even deeper. The one thing which breech-loading was calculated to improve was energy. But that was the quality the whole navy thought least of. Except against armour-plates, increased energy could only in theory improve the shooting. Yet it was generally believed that the accuracy of the gun was always swallowed up by the unsteadiness of the platform. Key himself had always asked for great shell power and close action. Though the current set the other way, and carried energy and long range against shell power and short range, it is not easy to deny that a consistent plan of action entertained by the navy, combined of superior speed and superior shell fire at close range, as opposed to inferior speed, inferior shell power, and increased energy at long range, might have set the current flowing the other way. It never seems to have been perceived that it never was possible to uphold inferior energy unless it was accompanied by its complement, superior speed.

We must not pry, either, into the secrets of the prison-house as regarded the relations between the departments of the Controller and of the Director of Naval Ordnance. It was common knowledge at the time that Captain Key had an exceedingly difficult part to play, one which required all the evenness of temper and public spirit that he possessed —a state of things almost certain to occur on the bringing together, with anomalous relations, of two remarkably able men, overflowing with zeal and the earnest desire for the public good, and each with decided, but differing views.

Captain Key became a rear-admiral in November 1866. He drew his reward from the scientific world by being made a Fellow of the Royal Society in the spring of 1868.

The change of Government which took place towards the close of 1868, when the Right Hon. Hugh Childers succeeded the Right Hon. H. T. Lowry Corry as First Lord of the Admiralty, created an atmosphere at Whitehall that was in every way distasteful to Admiral Key. The Controller, now Sir Spencer Robinson, became a member of the Board, and was understood to aid and abet to the utmost of his power the tendency to place rigid economy above all things else in naval administration, which was immediately displayed by Mr. Childers, warmly supported by the Parliamentary Secretary, Mr. W. E. Baxter, M.P. Doubtless, the antagonism between the general sentiments of the new First Lord and Admiral Key must have developed itself in a thousand particular antagonisms, where the pressure to make economies came face to face with the pressure to subordinate economy to efficiency. But only the usual rumours reached the outside world at first. Admiral Key was confirmed in his office early in 1869; but what happened later became the subject of debate in the House of Commons. Admiral Sir John Hay spoke of it as follows:—

"When it was found necessary to create the office of Director General of Naval Ordnance, Admiral Key was selected for the post, and his appointment was received with acclamation by the whole profession; for, at a time of great change in the art of naval gunnery, no man was more capable of giving advice. When his right hon. friend the member for Tyrone (Mr. Corry) quitted office, he left Admiral Key in that post, and supposed that his services would have been very greatly to the advantage of the present Board, for he was a gentleman of admirable temper and engaging disposition. He was, however, dismissed from that post, the only apparent reason being that the First Lord was anxious to give a fresh trial to a system of ordnance, and that Admiral Key thought that a fresh trial was unnecessary, because he had reported that: 'the service system satisfies every requirement of the service, and it would therefore be most impolitic to incur the enormous expense of introducing any other, until some defect is discovered in that now adopted, for which a permanent remedy cannot be found.' Admiral Key, having given an opinion which was counter to the wishes of certain individuals at the Admiralty, was removed to Portsmouth to be Admiral Superintendent of the dockyard there."

Mr. Childers, in replying, declared that Sir John Hay "had given a very mistaken account of what he called Admiral Key's dismissal or discharge . . . because he had run counter to the views of the Admiralty in regard to the Whitworth guns, there being, in fact, no correspondence then on the subject. There was not a word of truth in that. He was simply selected after his cruise in command of the coast-guard fleet at last Whitsuntide, under the eye of several members of the Admiralty, for the superior office of Superintendent of Portsmouth Dockyard, which had then become vacant by the appointment of Vice-Admiral Wellesley as Commander-in-Chief to the North American station. Instead of being a discharge or dismissal, it was exactly the reverse; the appointment was given him, as it was believed he would be anxious for it, as one of great honour and advantage to him. At the time that appointment was made, there was some difference of opinion among his advisers as to whether it would be wiser to send Admiral Key in command of the fleet, or to Portsmouth Dockyard; and he must take on himself the responsibility or blame, if it should be so considered, of not giving him a foreign command."

Sir John Pakington said that "His hon. and gallant friend (Sir John Hay) had used plain words. He stated that Admiral Cooper Key was dismissed or sent away from the office of Naval Director of Ordnance—to which he himself had the honour of appointing him—because he considered there would be a waste of public funds and extravagance on the part of the Government in undertaking fresh experiments with what was called the Whitworth Ordnance, when we were already in possession of guns performing the duty satisfactorily, and approved both by the profession and the public. Such a statement as this at once raised the question, Why was Admiral Cooper Key deprived of the post of Naval Director of Ordnance, which he held greatly to the advantage of the country? The right hon. gentleman opposite gave no satisfactory answer to that question."

Without going in the least behind the scenes, the debate left it perfectly clear that Captain Key had been removed from the office of Director of Naval Ordnance to that of Superintendent of Portsmouth Dockyard at a time when a sea command might have been offered him, and without favouring him with the usual courtesy accorded to officers of his rank, as to whether such a change would be agreeable to him. It remained perfectly evident that irreconcilable divergencies of opinion had sprung up between the First Lord of the Admiralty and Rear-Admiral Key. "Mr. Childers did not admit," said the *Times* in a leading article, "but his speech tended to deepen the impression, that the true causes of Admiral Key's removal had been assigned by Sir John Hay."

Some time in the spring of 1869 it was determined to assemble the Channel, Mediterranean, and Reserve Squadrons for a cruise, and Mr. Childers took the extraordinary resolution of embarking the Board in one of the ships, hoisting the Admiralty flag, and taking executive command of the combined fleets. The proceeding was perhaps unprecedented; and it certainly exhibited great confusion of thought on the subject of executive and administrative functions. The Admiralty as a Board is, no doubt, in the end an executive as well as an administrative body, but the exercise of its executive functions must, to be legal, pass through a certain form. Practically, there must be the signature of two Lords and a Secretary to a document containing the order, before it becomes criminal to disobey it. The idea of a Board of three persons being required to agree before a signal can be hoisted under the Admiralty flag, is at least incongruous. The admirals in command of the Mediterranean Squadron, Sir Alexander Milne, and of the Channel Squadron, Sir Thomas Symonds, strongly resented the First Lord's proceeding; Admiral Key in command of the Reserve Squadron, with the Admiralty on board the *Agincourt* as his hosts or his guests, and their flag flying at her masthead, probably had his own opinions; but he has not left them on record.

Admiral Key joined the *St. George* at Portland on the 11th of May 1869, and transferred his flag to the *Agincourt* on the 13th.[1] The Admiralty flag was hoisted later, and there was a cruise lasting about a fortnight. It is not necessary to dwell on the nature of the cruise, but it is certain that Mr. Childers was very much dissatisfied with what he saw, and that he misapprehended the causes of what he saw, that misapprehension entailing grave consequences on the service. That point will be dwelt upon presently, but it does not seem to be impossible that personal antagonism was developed by the close contact of deck and cabin between Mr. Childers and Admiral Key, which had its immediate consequences already alluded to, with others to follow.

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[1] The ships of the Reserve Squadron under Admiral Key's command were the *Agincourt* (ironclad), Flag-Captain T. Miller; *Duncan* (wooden line-of-battle ship), Flag of Rear-Admiral Hornby, Captain C. Fellowes; *St. George* (ditto), Captain M. S. Nolloth; *Trafalgar* (ditto), Captain C. K. Barnard; *Donegal* (ditto), Captain E. W. Turnour; *Hector* (ironclad), Captain A. D. De Horsey; *Royal George* (wooden line-of-battle ship), Captain Robert Jenkins; *Valiant* (ironclad), Captain W. A. Haswell; *Mersey* (wooden frigate), Captain J. Seccombe; *Cadmus* (wooden corvette), Captain R. Gibson; and *Scylla* (ditto), Captain F. A. Herbert.

The following memorandum, written by Admiral Key during the cruise, is useful as showing how ready he was to be severe when he considered that the interests of the service required it—

> "In submitting, for the consideration of the L.C.A., the enclosed letter from Captain —— of the ——, reporting the fetching away, while at sea, of the port bower anchor of that ship, and to his further explanation thereon, I would call attention to the great neglect shown in not having the anchor properly secured at the distance of 100 miles from the land, and more especially to the interpretation put upon the Admiralty instructions by an officer of the standing and experience of Captain ——. I submit that it calls for a severe expression of their Lordships' displeasure to the captain, first lieutenant, and staff commander."

Admiral Key wrote a long report, dated from the Admiralty on 13th June 1869, on the cruise of the Reserve Squadron, from which the following passages may be extracted as characteristic, or of historical value.

The ships assembled had been drawn from their posts as flagships or coast-guard ships at the different ports, where they had been in charge of skeleton crews. A large portion of the lieutenants, all the coast-guard men, the officers and seamen of the Royal Naval Reserve, who now completed the crews, had been embarked in each ship only a few days before the squadron left Portland with the Admiralty flag flying on board the *Agincourt*. Admiral Key dwelt upon the importance of converting the mixed character of the Reserve Fleet, consisting of wooden ships and ironclads, into one wholly of ironclads; and he asserted, practically, that the latest types of ships which were not at sea should be kept ready as coast-guard and flagships at home, as more immediately available, and in better order than they could be in the Steam Reserves at the ports. It is to be noted that this policy may be said to be now pretty fully adopted. He then pressed the necessity of assembling the Reserve Fleet regularly for an annual cruise to last three or four weeks. This recommendation, it will be noted, has been adopted for many years.

> "This will add," he said, "to the few opportunities of exercising officers of all ranks in fleet sailing, an exercise of such importance that it cannot be overrated. It was evident, during our late cruise, that many of the officers in the squadron had very little experience of this necessary duty, although improvement was manifest every day. The captains, however, laboured under many disadvantages besides want of experience in handling large ships. The officers of the watches had but just joined their respective ships, and were themselves unacquainted with the ships' companies. In addition to this, a new code of signals has lately been established, which, though far simpler and more easy to be understood than the former system, requires time and some experience to enable it to be carried out with readiness and accuracy.[1] Looking, then, to the improvements that actually took place during the short cruise, both as regards keeping station in order of sailing, and in the performance of evolutions under steam, I am of opinion that the difficulties experienced in these respects early in the cruise are due to the few opportunities afforded for assembling our ships in squadrons."

There hangs, attached to these words, an historical curiosity. Mr. Childers had prepared a very stringent scheme of naval retirement and promotion, which, though strongly upheld by many, has never yet worked satisfactorily, or done that which it was expected to do. In the year 1873 I felt it my duty to publicly criticise this scheme, and I specially assailed the claim that officers deteriorated unless they were kept continually at sea, as historically disallowed. I claimed it to be the other way, and that it would be easy to overdo the keeping of naval officers continually at sea.

Mr. Childers in controverting my views, which were of course drawn entirely from the facts of history and experience, while his were apparently empirical and without data to support them, declared that, "except for study and an occasional year's leave, every officer, in my judgment, should always be actively employed, and half-pay should be reduced, in point of time, to a minimum." He concluded by saying, in allusion to the question of which Admiral Key treated: "Had you seen what I did in 1869–70, of the consequences of the opposite system, when we decided to keep our fleets more at sea, you would, I think, be disposed to hesitate in propounding your present view."

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[1] This was the code and system of tactics which I had the honour to design r the Admiralty in 1865–66, and which had been finally issued to the service der my superintendence in 1868. It has ever since maintained itself, though a developed form.

I saw, of course, that Mr. Childers was mixing up two different questions, attributing the difficulties of fleet-manœuvring with a new system of tactics, by captains, etc. who had not had much experience of fleet manœuvring, and little or none of the new tactical system, to lack of ordinary sea service, and much half-pay. I naturally made an inquiry as to whether the officers in question had indeed had little sea service, and whether they had indeed been long on half-pay before taking command of their ships. I sent the results to Mr. Childers.

As to the captains, there were twenty-three of them. They averaged ten years' standing as captains; twenty-six and a third years' sea service; five and a third years' sea service as captains; and they had not been on half-pay more, on an average, than one year and four months before taking command of their ships. That is to say, that the causes assigned by Mr. Childers were actually absent, so far as the captains were concerned.

But the three admirals, Sir Alexander Milne, Sir Thomas Symonds, and Cooper Key, were admittedly three of the foremost sea-officers in the world. Sir Thomas Symonds was known far and wide as the first naval tactician alive. Sir Alexander Milne was in a harbour ship, or at the Admiralty for ten or twelve years, before he hoisted his flag to go to the West Indies. Sir Thomas Symonds was twelve years on shore before he took command of the Channel Fleet. Admiral Key, as we have seen, had been on shore since he reached home from the *Sans Pareil* in 1859. Yet, without question, this curious error has been allowed to influence our methods of dealing with the officers of the navy for the last quarter of a century or more.[1]

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[1] The really curious point, however, is this: it is not want of sea service, b want of the name being borne on a ship's books, which condemns officers retirement. Two officers may be doing precisely the same duties for a course

Admiral Key went on to speak in very high terms of the coast-guard men embarked. There were one thousand six hundred and seventy-five of them, none over forty-five years of age, and they were as a rule very efficient. The difficulty was officers. Admiral Key submitted that gunners and boatswains should be attached to the coast-guard, to act as quarter-deck officers when the men were embarked.

Notwithstanding that the period of the year was inconvenient for drawing on the Royal Naval Reserve, they had readily volunteered, and Admiral Key was on the whole well satisfied with the men, and with the practical knowledge of navigation and seamanship shown by the officers. But he showed that much remained to be done in the way of drills and exercises before they could display their full capabilities.

Key became Rear-Admiral Superintendent of Portsmouth Dockyard in June 1869. There is no naval office which is less understood by the outside public than that of Admiral Superintendent of a dockyard. While it is every now and then claimed that a naval officer must fail, just because he is neither an engineer nor a naval architect, it is just the fact that he is neither which makes him generally fill the post so well. There are many rival professions represented amongst the "principal officers" of a dockyard, and, in order to control the natural desire of each to enhance his professional position, someone must be at the head who is entirely impartial.[1] The Superintendent initiates little or nothing, except what relates to the general order and smooth working of the yard. Even the question of the

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years in an office on shore; but if one has had his name on a ship's books, he will be allowed to remain on the active list; if the other has not had his name so borne, he must be retired.

[1] Curiously enough, I had myself a complete experience of the truth of the argument set out. It happened that I was for some months acting as superintendent of a large dockyard, and, perhaps for the very reason that I was only "acting," there was a tendency to disruption amongst the contending professional interests of the principal officers. I now forget what the cause was, but I recollect seeing an explosion coming, and deciding how I should act when it came. It did come, in an apparently very strong form; but my entirely impartial position enabled me to deal with and reconcile the conflicting views, so that, when it was all over, more than one of the officers concerned expressed his opinion to me that had I been a professional officer I could never have set matters right. As it was, the contest never went beyond the Dockyard Board-room.

fitting of ships, which might be thought to necessarily engage the attention of the Superintendent, is almost wholly taken out of his hands by the captain of the Steam Reserve.

So that the Superintendent's office is almost purely administrative. He decides between rival questions, and especially between the naval officers in ships and the dockyard officials who are superintending work upon them, etc.; but he is so much of a distributor of orders from the Admiralty to the officers of the yard, and a collector of reports from the officers of the yard to the Admiralty, that there must be something quite out of the common way to raise questions as between the Superintendent and the First Lord of the Admiralty.

But, whatever the cause, questions very soon began to arise between the Admiralty and the Superintendent at Portsmouth, which seemed in the end to become personal ones between Mr. Childers and Admiral Key. The whole navy, knowing Key's remarkable urbanity and conciliatory temper, was astonished when rumours of these differences began to be noised abroad. They were understood to have to do with the receipt of stores and questions of contracts, with which the economical proclivities of the First Lord and the Parliamentary Secretary were known to be even violently mixed up. The navy had not then, and has not had to this day, any doubt about the side on which the fault lay. And, looking back over the calm of twenty-eight years, it is impossible not to feel that this quarrelling with Cooper Key has left one of the worst blots on Mr. Childers's naval administration.

Talking over it with the late admiral, I grew more and more astonished as the story unfolded itself; and more and more full of regret that a statesman at the head of the Admiralty should not have better known what was due to the high position he held.

In the end, Mr. Childers sent for Admiral Key to the Admiralty and offered him another appointment, as if he desired to improve his position. Admiral Key pointed out that there was no position he desired then open to him, and that he wished to remain where he was.

Twice—possibly three times—was this process repeated, but in the end Mr. Childers sent for him and said bluntly, "Admiral Key, I am going to remove you to Malta Dockyard."

Of course such a transaction became known far and wide. Party spirit ran high in those days, and there was a debate in the House of Commons on the 10th June 1870, Admiral Key's appointment to Malta dating 29th May, in which a good deal of plain speaking was used. This debate has been already alluded to, as Sir John Hay's charge against Mr. Childers was that he had first ousted Admiral Key from the post of Director of Naval Ordnance, and then from that of Admiral Superintendent at Portsmouth, both against his will, and much to his personal inconvenience. Mr. Childers scarcely denied the facts, chiefly defending himself in matters of detail with regard to stores, which were not of the gravamen of the indictment.

However, Admiral Key went to Malta, in due course, with the greatest cheerfulness, and carried out the duties of an easier and less onerous post with his usual eagerness and genial activity.

Only one event seems to have disturbed the even tenor of the admiral's way at Malta. Early in March 1872 news was brought by Lieutenant Dundas of the *Lord Clyde* (Captain John Bythesea), who had arrived by a passing merchant steamer, that the ironclad was badly on shore on the island of Pantellaria, some 130 miles west of Malta. Key was off immediately, like a shot, in the *Enchantress*, having ordered the *Lord Warden* and *Research* to follow with lighters and appliances. He reached Pantellaria at six o'clock on the morning of the 16th of March; found the *Lord Clyde* landing and throwing overboard her stores in order to lighten herself. Key concerted measures with Captain Bythesea, and at eleven o'clock the *Lord Warden* and *Research* with the lighter having arrived, the former ship was anchored in a suitable position and cables were carried out to the *Lord Clyde*, while the work of lightening her was vigorously pursued.

It was soon possible to begin to pull upon the wreck, and she was moved twenty yards that evening. The same work went on on the 17th, and, some swell setting in, a great effort to pull her off was made in the afternoon. The effort was happily successful, and she was safe at four o'clock. Key, with his flag flying in the *Lord Warden*, towed the *Lord Clyde* to her moorings in Malta harbour, rudderless, but safe, at noon on the 19th of March 1872.[1]

There was a pleasant interlude to Key's service at Malta, for, paying a visit to Palermo, the town's-people caught his name, and, some of the older inhabitants recognising him, he was suddenly surprised—and he could not but have been gratified—to find himself made the object of a remarkable and enthusiastic demonstration and welcome.

Previous to 1870 the higher education of naval officers had been much before the navy and the public. In that year the buildings of the Royal Hospital at Greenwich were practically lost to any prospective use, in consequence of the substitution of out-pensions to the aged and worn-out seamen and marines for the former plan of admission to the Hospital. The idea of utilising the buildings for the purposes of improved naval education coalesced with the desire for that improvement; and on the 28th of January a committee to inquire into and report upon the whole question was assembled under the presidency of Rear-Admiral Charles F. A. Shadwell, C.B. The report of this committee reviewed the educational systems pursued in some of the principal foreign navies, and sketched the former system adopted in the Royal Navy as well as that existing at the date of the report.

The reference in the appointment of the committee was fairly wide. It detailed the arrangements then prevailing at the Royal Naval College at Portsmouth in regard to (1) captains, commanders, and lieutenants on half-pay; (2) lieutenants qualifying for gunnery officers; (3) engineers; (4) naval instructors; (5) marine artillery officers; (6) sub-lieutenants to qualify for the rank of lieutenant.

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[1] The admiral was specially thanked by the Admiralty for this service, and his old friend Vice-Admiral Yelverton, who was Commander-in-Chief, added his own congratulations in a hearty manner.

The questions put were:—(1) Were there sufficient facilities for study given to these officers? (2) How should the results of study be tested; and what rewards should follow success? (3) Was the college at Portsmouth sufficient as to place, and for what purposes should the buildings of a college be used? The committee was to consider the vacant buildings of Greenwich Hospital in connection with these points? (4) Was it desirable to give officers facilities to study at Cambridge?

In one way the committee seemed to go beyond the reference, and in another way to fall short of it. It reviewed the systems of earlier education in foreign navies and in the British service, confining itself, however, almost exclusively to the single class of executive officers. It then made a series of proposals with regard to the education of midshipmen and naval cadets on board ship.

It then submitted that the college at Portsmouth had not succeeded as well as it might have done, on account of defects in the buildings; because half-pay officers frequently joined the college at too advanced an age; because of the inadequacy of the educational staff; because of the absence of a proper system of examination for officers on half-pay; because of the want of sufficient inducements being held out to officers to study; because of the frequent overcrowding of the college by temporary inmates, sub-lieutenants waiting to pass their examinations.

The proposal was to exclude the sub-lieutenants from residence at the college, and to make it a place of study, which should be wholly voluntary for officers who had passed their examinations as sub-lieutenants. Otherwise the system should go on nearly as before, except that test examinations should be applied before permission to study at the college was granted. More prominence was to be given to foreign languages; appliances and models should be supplied in greater and more efficient quantities; the educational staff should be increased; a Board of Education should be formed out of the staff of the college. Examinations should be compulsory, certain advantages following success, and certain disadvantages following failure.

Upon the great question of all, the committee was unable to agree. The naval members strongly objected to transferring the college to Greenwich, while the civil members, including the Director of Naval Education, the Rev. Dr. Woolley, were unanimously of the opinion that Greenwich Hospital should be adopted as the naval college.

Rear-Admiral Key was before this committee, and his evidence fills thirteen columns.

He said he had studied at the college in every rank—mate, lieutenant, commander, and captain—whenever he was on half-pay, and that he had been superintendent of the college for three years. He was for extending education generally, and for increasing rewards for higher attainments; but he said:—"One principle that I have advocated ever since I have been in the service, and which I feel more strongly now than I ever have, is, that it is inadvisable, and would be of no use, to attempt to educate highly the whole body of officers." He thought higher education should only be for those who aspired to it voluntarily; but all arrangements made should be for the good of the service, not for the benefit of the individual. "It would be unwise to allow officers who fancy they can pick up a certain amount of information to partake of the advantages of a scientific institution, unless they can show that they are capable of obtaining sufficient information to be of use to the service." He did not believe in "picking up" a subject; and would much rather see an officer take up one subject and master it, than take up two or three superficially. For young officers, the most important matter was the inducements that could be offered to them to pursue the higher education.

On the question of the inducements it might be possible to offer, Key laid much stress on his proposal of 1862 for the abolition of the special class of navigating officers. He was assured that his view was a true one; and that if higher pay and the usual promotions followed the career of naval officers who, up to and including the rank of commander, undertook navigating duties, the system would prove an impulse to men to qualify in the higher education desired. He was not in the least afraid of the navigation or pilotage of our ships deteriorating under such a system. He thought that generally the higher the education of a good man was, the better he would do his duty and the more valuable he would be to the navy. The French officers were more scientific, as the English officers were more practical; but it did not follow that English officers with higher scientific acquirements would be less practical than before.

The scope of the questions put to Admiral Key was somewhat narrow, and they bore perhaps as much on the earlier as on the higher and later education, which was alone properly before the committee. At that time the arrangement was that cadets spent two years in the *Britannia*, and then as midshipmen, one year in a sea-going training ship, before taking their places in a regular man-of-war. Admiral Key was of opinion that under these conditions, or at anyrate if the time in training ships was somewhat increased, there would be no need to supply naval instructors afloat, except in flagships for the purpose of holding examinations into the progress made by the young officers in following up what had been taught.

Owing, perhaps, to the narrowness of scope alluded to, Rear-Admiral Key was satisfied with the idea of a small college—that at Portsmouth being quite suitable if altered and improved by additions—devoted almost wholly to offering facilities to the few who, by acquiring a higher scientific knowledge, might advantage the navy. He was entirely against utilising the buildings of Greenwich Hospital. "Irrespective of there being a building then vacant at Greenwich that might be turned to use, he could see no advantage that would result from removing the college to Greenwich."

It is to be noted, however, that if the view of the future was so far veiled from his mind as to locality and greatness of presence destined for a forthcoming naval university, Key's ideas of the coming naval officers, when the separate navigating class should cease to be, have passed into successful practice in almost every particular.

The thing was to go on, however, as to Greenwich, in spite of that drag which naval opinion offered in this case, as in so many others. A committee was assembled in March 1872 for the sole purpose of arranging how Greenwich Hospital might be turned into the great naval university it has since become. The chairman of the committee was Admiral Tarleton, a Lord of the Admiralty, Dr. Woolley, the Director of Naval Education, and Colonel Clarke, the Director of Works at the Admiralty.[1] They were to consider and arrange the details for the establishment of Greenwich for the education of (1) the engineers of the fleet; (2) naval architects; (3) acting sub-lieutenants prior to their final examination for lieutenants in navigation and steam; (4) candidates for commissions in the Royal Marine Artillery; (5) sub-lieutenants after passing; and (6) half-pay officers.

It is worthy of note how much the balance of opinion, which determined this reference, had swayed away from that which determined the report of Admiral Shadwell's committee. What was last has become first, and what was first has become last; while the whole level is higher and more extended. The committee went fully into the whole matter, and practically settled all the details of curriculæ, and staffs of professors and lecturers for the different classes of students. The rearrangement of the buildings was left over, but that involved, of course, an enormous quantity of subsequent and difficult work. The first report of the committee was dated 29th June 1872; and perhaps the only part of it that requires special note here, was the much larger place proposed to be given to naval history and tactics than it was subsequently found expedient to adopt. A lecturer was to be appointed, who was to deliver thirty lectures at £10 per lecture. It was never found feasible to arrange for more than six or eight lectures, and the fee was reduced to one-half. Who is to say that an English

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[1] Now Lieutenant-General Sir Andrew Clarke, G.C.M.G., etc.

Mahan might not have been the outcome of the larger scheme, as the still larger scheme of the United States afterwards produced the great American authority.

Holding the views above summarised, it must have been rather a surprise to Admiral Key to receive at Malta, while this committee was sitting, a letter from Mr. Goschen, who had succeeded Mr. Childers as First Lord of the Admiralty, offering him "a new and most important post about to be established, the Presidency of the New Naval Educational Establishment at Greenwich." It was not decided whether it was to be called a "college" or a "university," but the objects and sphere of the proposal were already clearly defined, and "their importance," said Mr. Goschen, "to the welfare of the navy could not be exaggerated." The appointment was to be tenable for three years at a salary of £2000 a year with a house in the building. Mr. Goschen was anxious that the post should be identified with the active portion of the service, so as to command its confidence, and to prevent any sentiment of the theoretical branch being separated from the active and the practical, growing up. It was not to disqualify for future active employment.

The First Lord asked for an answer by telegraph, as, though some months must elapse before the scheme could be finally started, it would be desirable that, in the event of Admiral Key's accepting the post, he should come home soon in order to assist in the elaboration of many of the details, and of the educational arrangements.

On the 19th of April 1872 the admiral replied as follows—

> "Permit me to offer you my thanks for the high compliment you have paid me in selecting me for so important a position as that of President of the Naval College at Greenwich. It is not a position that I should have sought for, or that I consider myself fitted for; but I have been so desirous for many years to see the education of naval officers placed on a better footing than hitherto, that I am quite willing to take whatever share you think me fit for, in creating a new system—for it must be a *creation*—and the service will have good reason to be grateful to you for establishing it. Do not think me ungracious if I say that I accept your offer reluctantly. My inclinations lead me to prefer the command of a fleet, and you will perhaps have become aware that our highest ambition is to be selected for the command of a fleet in time of war. We therefore hesitate to place ourselves in such positions as would, perhaps, lead to our being passed

over for such a command when an emergency arose. I feel also that the honours of our profession (which I confess I covet), and such rewards as good service pensions, which I must of necessity desire, are mainly due to those who serve afloat. Without therefore expecting that you will hamper yourself with a promise, I trust that you will not consider that I am deserting my post, if, when a system is established, and in good working order, I seek employment afloat. I shall lose no time in taking up the work at Greenwich when my successor here is appointed.

All naval officers will understand Admiral Key's position. The rewards of the navy seldom or never come to the performers of special and out-of-the-way services to it. Tradition is against it, and there are no precedents, as in the army. If there are not war services, then those that count highest are long service in successive posts of ordinary command at sea; as the command of ships to captains, and the command of the Channel Fleet or of foreign naval stations to flag officers. Admiral Key had passed from the rather special post of captain of the Steam Reserve at Devonport to the very special post of captain of the *Excellent*, and to the new and still more special post of Director of Naval Ordnance. For every one of these posts he had been selected because there was no one else in the service so well qualified to fill them, and because there was an absolute need of him. But they did not count as well as the most ordinary and easy command of ships at sea. When Key attained his flag, he naturally hoped to get at once out of those posts that involved so much wear and tear, anxiety, and worry, but yet did not count, for the easy and pleasant command, as a rear-admiral, of a foreign station, which did count. But it was the other way. Just because these special services were out of the common way, it was more difficult to get back into the common way. Instead of getting the command of a foreign station, which would have been a reward, Key had to put up with Portsmouth Dockyard, which ranked below all sea-going commands; then he had been passed on to Malta Dockyard in a way that showed more plainly than anything else, how little all his special services had come to, in the Admiralty view. And how he was asked to go back to the work, the worries, and the anxieties of a post so very special, that it was almost certain to stand against him if it came to be a question between his services and those of any other officer of his standing who had had a succession of sea commands. As far as it was possible for Key to be angry and disappointed, when the public service and his own interests came into opposition, he was angry and disappointed now. Some note was indeed taken at the Admiralty of the admiral's invidious position. It was intended that he should hoist his flag as President of the College, and orders to that effect were even issued. But the reversal of traditional usage was too great, and the presidency of the college became, and has remained, a civil appointment.

The appointment being settled, Key was permitted, as his health was bad, to give up the charge of Malta Dockyard before his successor arrived, and he quitted Malta *en route* for England, in the Italian mail steamer *Palermo*, on the evening of the 6th of August 1872. The extraordinary popularity which attended Key wherever he went, and which had drawn a really considerable assemblage to speed the parting guest on his quitting Portsmouth Dockyard, turned out the whole island of Malta to bid him good-bye. Previously, there had been quite a stream of valedictory addresses, and now all who had had anything to do with him crowded to see the last of him. Yelverton wrote officially to say that, "glad as he was to learn that, under the circumstances of temporary indisposition, their Lordships had been pleased to allow him to leave his post at Malta, he could not conceal how much he regretted the loss of his most valuable services and support, as his second in command, and Admiral Superintendent of Malta Dockyard. His untiring exertions in promoting the interests and efficiency of the service at all times, more especially in cases of difficulty and delay, deserved his warmest thanks. May the temporary absence from service afloat," concluded the admiral, "afford you an opportunity of displaying your eminent abilities in the organisation of an important national institution, which I feel certain, under your administration, will be crowned with success."

Admiral Tarleton's committee had continued to sit after the production of its first report, and on Key's arrival in England he was made a member of it, and naturally became its most active member. The conversion of the buildings to their new uses appears to have been largely in Key's hands while he worked with Colonel Clarke, R.E., and the Department of Works at the Admiralty. Besides the attention to infinite details which this involved, there were infinite details to be settled in finally settling the curriculæ, selecting and arranging the professional staff, the rules of discipline, and fitting it all into the peculiarities of a building, which, magnificent and worthy of the highest uses, was not in the slightest degree designed for those to which it was now to be turned.

Several establishments, and several plans of education, were now to be brought together and worked as one system. The committee had in its first report settled the principles, and just before the close of the year 1872 it issued a second report which bore Key's signature, which may be said to have given the final touches to the scheme. It is, possibly, a little significant, and perhaps bears testimony to Key's influence, that the order in which studentship at the college appeared, was, in this report, once more reversed. It began with captains and commanders with the stress upon their higher education which had been shown in Key's evidence before Shadwell's committee. Then it went on to lieutenants, navigating officers, acting lieutenants, and sub-lieutenants, Royal Marine Artillery officers, engineers, dockyard apprentices, private students, officers of the mercantile marine. The main subject of the report was the results that were to follow success or failure in the examinations.

But apart from committees, and even apart from the Board of Admiralty, many details fell for settlement directly to Admiral Key as President-elect, and Mr. Goschen, the First Lord of the Admiralty, as governor. For instance, it was a question whether engineer students were to learn French; and it was decided that only advanced students were to take that language up. Then came considerations about emoluments and pensions that might raise awkward questions, and must be delicately dealt with. In Key's view, captains and commanders entering on a course of study at the college entered on a serious task, which ought to be completely prosecuted; how should it affect their chances of employment at sea? The hands of the Admiralty must not be tied. The public had long enjoyed access as sightseers to Greenwich Hospital; what was to be done about their claims? Concessions might be made during July, August, and September, when the bulk of the residents would be away; but was the admiral sure of his ground, in case the interests of the college should be interfered with?

Such details crowded in for examination and final settlement, which seem in the end to have borne the impress, more or less, of Admiral Key's views.

It would be foreign to the purpose of this biography to discuss the character and principles of the new university, beyond quoting Key's views sufficiently to enable anyone to perceive how far they became incorporated in the great work, and what fruit they have borne. It is certain that, however his original views were contracted in presence of the possibilities of the little building at Portsmouth, they rose with the occasion in sight of the magnificent edifice of William III. and his successors on the throne. But he could not carry all that he desired. The lectureship of naval history was not filled up, and nothing was done about naval tactics, in spite of his pressure, nor could he succeed at first in securing lecturers on international law. The naval history idea was not put in force at all until the end of the year 1875, and then it dwindled down to calling on Mr. J. K. Laughton,[1] one of the naval officers' instructors in mathematics and navigation, to deliver a short course of lectures in the next session.

Key was forward in urging provision for the physical recreation of the students in the way of racquet-courts, fives-courts, and gymnasia. It was not possible, he thought, that close students could be kept in health and vigour unless bodily exercise, with an interest in it, were to be immediately at hand. Economy, on the other side, was for curtailing those matters which might be thought extraneous; but Key seems generally to have had his way.

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[1] The present Professor Laughton, author of many standard works on naval history, and originator of the Navy Records Society.

The whole business had, however, been attacked with such goodwill that the Royal Naval College at Greenwich, as it was ultimately called, was opened on 1st February 1873. A minute published by the Admiralty announced that the college was open to the following ranks, viz.:—Captains, commanders, lieutenants, navigating officers, instructors, acting lieutenants, and acting sub-lieutenants; officers Royal Marine Artillery; officers Royal Marine Light Infantry; officers of the engineer branch, viz. chief engineers, engineers, first-class assistant engineers, and acting second-class assistant engineers. A limited number of dockyard apprentices would be annually selected, by competitive examination, for admission to the college. A course of instruction would also be open to a limited number of private students of naval architecture or marine engineering, and officers of the mercantile marine.

It was stated that the desire was to give to the executive officers of the navy generally every possible advantage in respect of scientific education; but no arrangements would be made at all prejudicing the all-important practical training in the active duties of their profession. The object of securing the highest possible scientific instruction was, in the opinion of the Lords of the Admiralty, most effectually to be obtained by bringing together in one establishment all the necessary means for the higher education of naval officers, and of others connected with the navy.

The courses of study embraced pure and applied mathematics, applied mechanics, nautical astronomy, surveying, hydrography (with marine geography, meteorology, and chart-drawing), physics, chemistry, metallurgy, marine engineering, marine architecture, fortification, military drawing and naval artillery, international and maritime law, law of evidence and naval courts-martial, naval history and tactics, including naval signals and steam evolutions, modern languages, drawing, hygiene (naval and climatic).

This was a goodly list, in which perhaps the only marked shortcomings arose in the matters of naval history and tactics. But some idea may be formed of the great and sudden expansion of the educational idea with which Key was now identified by comparing the staff of the new university in 1873 with that of the old Portsmouth College in 1872. The staff of the latter had consisted of the First Lord of the Admiralty as *ex-officio* governor, the captain of the *Excellent* as *ex-officio* superintendent, a professor, an instructor in fortification and mechanical drawing, an assistant in the observatory, and a clerk.

The staff at Greenwich consisted of the First Lord of the Admiralty as *ex-officio* governor, a vice-admiral as president, a captain in the navy as captain, a director of studies, five professors, one assistant professor, seventeen instructors, three demonstrators, a storekeeper and cashier, two clerks, a writer, and a clerk of the works.

It was not, in 1872, thought worth while to take any note of the officers studying at the Naval College at Portsmouth; but the list given in the Navy List for December 1873 stood thus:—Six captains, seven commanders; fifty-one lieutenants, four navigating lieutenants, twenty acting sub-lieutenants, four acting navigating sub-lieutenants; five engineers, two assistant engineers first-class, five second-class, and thirty-six acting second-class assistant engineers; one lieutenant Royal Marine Artillery, two lieutenants Royal Marine Light Infantry for probationary lieutenants Royal Marine Artillery, and eleven probationary lieutenants Royal Marine Artillery. So that, in all respects, the new university was, as Key said it must be, "a creation."

The following, from the pen of the late Dr. T. Archer Hirst, F.R.S., who was the first Director of Studies at the Naval College at Greenwich, gives a sketch of Key's work in establishing and maintaining that institution:—

"Early in 1873 the Royal Naval College was established at Greenwich under the auspices of Mr. Goschen, then First Lord of the Admiralty. With it was incorporated, not only the previously existing Royal Naval College at

Portsmouth, but likewise the Royal School of Naval Architecture and Marine Engineering at South Kensington.

"Admiral Key, who was entrusted with its organisation, became its president, and certainly no happier selection could, at that time, have been made. His geniality of disposition had won for him the friendship of all his comrades. His thorough sympathy with the qualities—social, physical, and intellectual—which pre-eminently characterised our naval officers; his own distinguished career in the service; and, above all, his well-known bias towards the most advanced scientific treatment of all naval questions, naturally signalised him as the most appropriate head of the newly-founded institution.

"Sir Cooper Key's main endeavour, it may be said, throughout his tenure of office at Greenwich, was to supplement the practical training already accessible to young naval officers, by theoretical instruction of equal thoroughness, given under the direct superintendence of the most accredited of our civil, as well as naval, authorities.

"The fact that the several courses of study which he organised to this end have, with but few modifications, held their ground to the present time (1889), and have distinctly raised the scientific status of the whole service, is the very best testimony that could be furnished to the soundness of Sir Cooper Key's insight, and to the success of his persevering efforts to realise his views.

"This success, and the high esteem he won by his well-directed action at Greenwich, were gracefully and appropriately recognised on his leaving the college in 1876 to take command of the fleet in America. Naval officers, both at home and abroad, as well as the Greenwich educational staff, with whom he had always worked harmoniously, seized that occasion for presenting to the college an excellent portrait, by Haynes, of its first president.

"This portrait will do more than recall the bright features of the able officer whose unexpected death all now deplore. It will unquestionably mark an epoch of the highest scientific import in the history of naval education."

The climate on the banks of the Thames never agreed with the admiral, and he never had perfect health while there. His original dislike to undertaking the sort of work the post imposed on him, did not leave him on a closer acquaintance with it. The work worried him, and the confinement to office told upon him. His conscientious discharge of duty postponed his hours of exercise outside the walls of the college till after six o'clock in the evening on most days. Then he took long walks with members of his family, and these walks in the winter were carried on in darkness. Otherwise his exercise took the form of games of racquets and lawn tennis within the college precincts. On the Saturday half-holidays he commonly treated himself to being a spectator of the college cricket or racquet matches. Always lithe and active, he used to boast that at Greenwich he could beat any of his children in running upstairs.

On the 30th of December 1874 Sir Cooper Key lost his wife. Lady Key had been in delicate health when, having caught a severe cold, pleurisy and congestion of the lungs supervened, with a fatal termination.

At last one of the good things of the service was to fall to Sir Cooper's lot. He was offered, and eagerly accepted, the command of the North American and West India station. His appointment bore date 22nd December 1875, and he hoisted his flag in the *Fisgard* on 1st February 1876. On the 17th he sailed by packet for Barbados. There he hoisted his flag on board H.M.S. *Eclipse*, and proceeded in her to meet his predecessor, Admiral Sir George Wellesley, at St. Thomas. He touched at Antigua on the 10th of March, and found the *Bellerophon* at St. Thomas on the 17th, flying Sir George Wellesley's flag. The command of the North American and West India station was there and then handed over to him, and his flag took the place of that of his predecessor on board the *Bellerophon*.

Of Sir Cooper Key's public life as Commander-in-Chief there is positively nothing to record. From being so long a busy originator and reformer he lapsed for three years into an executive of the most routine character. From month to month, or from week to week, there is nothing to describe in the Commander-in-Chief's letters but the movements of the ships under his command, diversified by an occasional note relative to the chronic difficulties in Cuba and in other foreign territories; to the equally chronic difficulties in regard to the fisheries on the coast of Newfoundland; and, for a wonder, as to disaffection which showed itself in the island of Barbados owing to the peculiar views of its then governor. But in no case was there more than a ripple over the otherwise still waters of his command. Its story is simply how his flagship, the *Bellerophon*, generally accompanied by two or three smaller vessels, swept, according to season, to Bermuda in the spring; to Halifax and other northern ports in the summer; back again to Bermuda in the autumn; and then from island to island and from port to port in the West Indies during the winter.

But in the course of these peregrinations Sir Cooper Key met the lady who became his second wife. The Governor of Bermuda was Major-General J. H. Lefroy, C.B., who had been a member of the Royal Commission of 1859–60, and therefore a colleague of Sir Cooper's, and, subsequently, a great friend. Paying a visit to the general was his niece, Miss Evelyn Bartolucci, daughter of Signor Vincenzo Bartolucci of Rome, who was the only son of General Bartolucci and grandson of the eminent advocate, First President of the Court of Appeal under Pius VII. This lady was married to Sir Cooper at Halifax in the month of October 1877.

The uneventful command and period of rest came to a close, according to custom, in May 1878.[1] The successor was Vice-Admiral Sir E. A. Inglefield, Kt., C.B., F.R.S., who had known Key when he was his father's flag-lieutenant in the River Plate. The change of flag took place at Halifax, and on the 24th Sir Cooper Key sailed for England by packet.

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[1] Perhaps it was chiefly remarkable for the fact that Sir Cooper had four flag-captains—Hugh Campbell, Frank Thomson, J. A. Fisher (now Vice-Admiral Sir John), and (acting) W. F. S. Mann.

The admiral was but a few days at home, when he was ordered to hoist his flag in the *Hercules* and take command of the Reserve Squadron for a course of manœuvres, carrying out, therefore, in his own person, the recommendations he had made after the conclusion of the cruise of the Reserve Squadron in 1869. The squadron began to assemble at Portland on the 13th of June 1878, the *Hercules*, with Key's flag flying, arriving there from Spithead, in company with the *Warrior*, *Valiant*, *Penelope*, *Resistance*, and *Hector*, iron armour-clads; the *Lord Warden*, wooden armour-clad; the *Boadicea*, iron unarmoured frigate cased with wood; and the *Lively*, paddle despatch vessel. On the 15th of June, the admiral was joined by the *Cyclops*, *Hydra*, *Gorgon*, and *Hecate*, iron armoured double-turret ships for coast defence; the *Prince Albert*, iron armoured quadruple turret ship, the earliest built on Captain Cole's plan; the *Glatton*, iron armoured single-turret coast defence ship; the *Blazer* and the *Bustard*, two of Key's and Rendel's single-gun coast defence gunboats—all from Plymouth. On the 16th, the *Tay*, iron river gunboat, built for service in China, arrived from Portsmouth. On the 18th of June, the *Tweed*, another river gunboat, arrived, and, as the *Thunderer* was previously at Portland, the complete squadron now consisted of 6 broadside masted armour-clads; 1 sea-going mastless armoured turret ship; 6 coast defence armoured turret ships; 1 unarmoured masted frigate; 2 river and 2 coast defence gunboats; and 1 despatch vessel,—in all, a sufficiently incongruous group of 19 sail. Possibly, the anomalous state into which invention had at this time landed us, was not without emphasis in another direction. The ships were assembled for a sea cruise; but it was very doubtful whether, though the ships were to be really at sea, the officers could be technically allowed to have gone out of harbour. Sir Cooper Key had to urge that, properly speaking, going to sea was serving at sea; otherwise "sea service." But it is quite possible that the service might have been ruled to be only "harbour service." Another kind of invention had accompanied the materially anomalous conditions, with some that were personally quite as anomalous.

Key took his first turn with the turret ships on the 18th of June, hoisting his flag in the *Thunderer*, and taking with her the *Prince Albert*, *Gorgon*, *Hecate*, *Hydra*, and *Tay* to sea for an exercise at target practice. On the 20th, the same squadron, with the *Glatton* added, was out firing battering charges, and practising tactical evolutions. On the 27th, the turret squadron was again at sea practising tactics. The admiral had gained so much confidence in the turret mastless ships that he wished to extend their cruises. But as the Admiralty thought that none of them, except the *Thunderer*, were really seaworthy, the proposal was not adopted, and early in July the squadrons separated, Key taking the masted ironclads to Berehaven as his headquarters, whence they proceeded on more lengthened sea cruises.[1] Rear-Admiral Boys, who had been second in command of the squadron, was left behind at Portland with the turret ships and gunboats. Exercises under sail were still considered the proper and important object of the manœuvres, so that the admiral, only as a sort of second thought, mentions that the squadron "had also been manœuvred under steam whenever the weather permitted."

The squadron was back again at Portland on the 3rd August, and the cruise, so far as exercise or experiment was concerned, was over; the *Hercules* was back at Spithead on the 14th, and the flag came down. It was a good deal remarked upon at the time that this was the flag of a full admiral—he had attained that rank in March 1878—and that it was rare to see it hoisted by the officer in command of a sea-going fleet.

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[1] It is to be noted, and I think it is congruous with the whole play of Key's mind round the question of strategy, that at this late date he had not one word to say against the policy of building "harbour defence ships," although he thought those under his command might be improved upon. "I consider," he wrote at the end of the cruise, "that the *Gorgon* and *Hydra* class of turret ships are thoroughly well adapted for the service for which they were designed, viz. for home service and harbour defence." All he would concede was, that he would "not consider the money they cost well spent unless they had been fitted for more than this, as in my opinion they are. I consider that they may safely be sent to the Mediterranean or the Baltic, where, in war time, they would form a very valuable auxiliary to our sea-going fleet, for the attack of fortified places and for many other services during war."

Sir Cooper Key wrote in strong terms of the good conduct of the officers and crews, and especially spoke of the efficiency of the coast-guard men as a reserve. Before leaving the *Hercules*, he addressed the officers and ship's company in laudatory terms. On his leaving the ship, that impulsive cleavage of disciplinary rules, which only follows extreme regard for a commander, took place. The ship's company broke out into vigorous and uncontrolled cheering of the chief who, after forty-three years of work in it, was now quitting, finally, the active service of the navy.

The approval of the highest authority was not wanting to support the enthusiasm of the lowest. The Queen caused to be communicated to him "an expression of the gratification which Her Majesty had this day (the 13th of August) experienced in inspecting the ships and vessels assembled under his orders at Spithead."

It must not be forgotten that the early assembly of the "Particular Squadron," as it was termed, had a political object, which only faded away as the strain in our relations with Russia became easier. But it was not overlooked that if the strained relations should develop, even the coast defence ironclads might be fit for Baltic service, and that, Sir Cooper Key's flag would remain up. What a difference there might have been in the close of the active career!

CHAPTER XVII

AT THE ADMIRALTY AS AN ADMINISTRATOR—1879–1886

SIR COOPER KEY, on the dispersal of the "Particular Squadron," was well aware that in all probability he would become First Sea Lord of the Admiralty when the post, then held by Sir George Wellesley, fell vacant in 1879 under the age rules; as there was no other officer who could be so fitly chosen to take his place. Sir Cooper was gazetted First and Principal Naval Aide-de-Camp to the Queen on the 15th of June 1879. On becoming aware of the honour about to be conferred on him, he generously informed the First Lord that the service would be better pleased if the honour should fall on Sir Geoffrey Hornby rather than on himself. It would, however, have been quite contrary to precedent to have passed Sir Cooper Key over; and, apart from seniority, his services gave him claims superior to those of the other admiral.

In the estimation of the navy, the post of First Sea Lord of the Admiralty, while it is the most onerous, is also amongst the most thankless that can be filled by a naval officer of rank. The First Sea Lord, whether his responsibilities be defined by Order in Council, or left to be inferred by the terms of the patent, and by custom, is likely to be held as the author or prime mover of measures in which his opinion has been overruled, and against which he has perhaps thrown all his force. Outside Whitehall it is constantly forgotten that, whatever may be artificially set out in documents, the Board of Admiralty is a Board, and that its members are bound by those general considerations which govern the members of any other Board. It is true that the members hold their offices by favour of the political First Lord, and that therefore his decision always has been, and always must be, final. But yet members so appointed may, in any critical case, perceive a divided duty. No doubt, before accepting a seat on the Board, it is an officer's business to ascertain what its general line of policy is likely to be; but circumstances may involve a change of policy, or measures may be proposed which seem to a member to conflict with the general line of policy accepted; or the member may earnestly desire the adoption of some measure to which other members demur, or which the political First Lord declines to allow. In every such case, the member must balance between the general and the particular duty before him. The sole power in his hands is resignation; and he must gravely consider whether there will be loss or gain to the service and the public by his exercise of it. It is quite clear that no single member of the Board can expect to see every measure that he desires carried, or every proposal that he dislikes discarded. This cannot be so, even with the First Lord, who, if he proposes to force the hands of the Board in any way, runs the risk of breaking it up, and, therefore, of being left powerless until he has selected a new one.

So that a system of compromise, and of give-and-take, is inevitable at the Board of Admiralty, as it is with any other Board carrying on business. But, on the other hand, the navy and the public often fail to take account of these things. The navy especially often judges for the Board without cognisance of all the facts that are before it. It is apt to attribute to the political First Lord a power of coercion which, in fact, he can scarcely exercise; and when things are not going quite as the naval public opinion thinks proper, it decides that the naval members of the Board are submitting to coercion, which their duty calls upon them to resist by resignation. A sort of belief, in fact, arises in the navy, and spreads from it to the general public, that in naval business the navy shall govern, no matter what the view of the Cabinet of the day may be.

Apparently, the Orders in Council of 1870 and subsequently, which seemed to restrict the Junior Lords of the Admiralty to duties assigned to them by the First Lord, and to take away from them that responsibility for general policy which seemed to be thrown on them by the patent, may have also taken away from them the right of resignation on account of difference of opinion. If they were responsible only to the authority which had appointed them, their position was not so very different from that of officers in command of ships or fleets—of which the essence is that the duty shall be carried out irrespective of the opinion of the agent.

But if the right to resign, and the responsibility for exercising that right, were weakened by the Orders in Council as regarded the Junior Lords of the Admiralty, the fact greatly enhanced the difficulty of the First Sea Lord's position. If he was made the only member of the Board who could tender independent advice to the First Lord, it followed that he alone was responsible for the naval policy pursued by the Board. If that policy was held to be defective or wrong by the best naval opinion, the First Sea Lord, as representing it, was held to be bound to resign if he could not get it changed.

So strongly did this idea possess the minds of the leaders of the navy, that when the late Sir Geoffrey Hornby was a member of the Board in 1876, he made an attempt to establish a "ring" amongst possible First Sea Lords, in order to prepare to coerce the Government into adopting measures of assumed reform. He held that there were only three men—himself, Rear-Admiral Beauchamp Seymour, and Sir Cooper Key—who could be held fit for selection as First Sea Lords, and that, if these three came to an agreement not to accept the post but under a pledge that those reforms would be granted, the Government would be coerced into granting them. No immediate answer from Sir Cooper Key is extant, but when in 1879 it seemed that any change would bring him the offer of the First Sea Lord's seat at the Board the matter was revived.

We have seen that there is good reason to believe that as captain of the *Excellent*, as Director of Naval Ordnance, and as Admiral Superintendent at Portsmouth, Sir Cooper

Key had shown an absolutely unyielding spirit, and had thrown his personal convenience to the winds, rather than swerve from what he considered his duty. When then, finding that Sir Geoffrey Hornby and Sir Beauchamp Seymour had agreed to the compact, he declined to follow them, there is no reason to doubt that his action was guided by his view of his duty. On the other hand, we have seen how, all through his career, he had been, though a reformer, a very cautious one. He was not at all apt to be swept off his legs by those excited currents of opinion which suddenly create great changes. It was necessary for him to thoroughly understand and decide upon the proportions of evil or good likely to follow any change before he acquiesced in it. He did not like great steps in advance which might possibly be wrong ones; and in declining to fall in with Sir Geoffrey Hornby's and Sir Beauchamp Seymour's views, he was only doing that which might have been predicated of him. For it was a particular reform which Sir Geoffrey Hornby advocated. He had felt, when at the Admiralty, the inconvenience of the amount of "current business" in details which was thrown upon the Lords, and occupied time which should have been devoted to larger questions. His complaint was that, under the then existing organisation, the service was not, and could not be, properly worked. There was no time to enable fitting arrangements to be made for war, and the outbreak of one would "go far to ruin our naval reputation and, of course, that of the poor devil who might be at the top of the tree." What was wanted was subordinate naval assistance. There was no one between the Naval Lord and the civil clerk, who, however able and however loyal he might be, could not possibly help with a technical opinion, or even make a technical *précis* of the points to be considered. Admiral Hornby's proposal was to convert one or two of the "branches" at the Admiralty into purely naval departments, worked by naval officers.

Sir Cooper Key was probably not prepared to dispute the wisdom of such a change; but he wrote that "he felt it a great drawback to his power of being useful that he had not already served on the Board. In the first place, it put it out of his power to make stipulations on the offer" (of the post) "being made, as he could do so only from personal experience." He had not, in fact, what he considered knowledge sufficient to judge of the proposed measure from all points of view, and, following the precedent set up by his character, he declined to pledge himself to it.

But, of course, this episode, being known to most of the leaders of the navy of the day, had a tendency to create prejudice against him in their minds. He was to some extent held to have "gone against the service" in accepting the post. On the other hand, he had long felt that there was not, as it were, sufficient naval force at the Admiralty. He had been, while captain of the *Excellent*, made aware that he was actually the head of the naval artillery, while there was at Whitehall a nominal head, without sufficient backing to exercise the headship. He had had experience both of the difficulties and of the advantages arising from the establishment of a separate artillery department in naval hands. Admitting, in a general way, the necessity of strengthening the purely naval element at the Admiralty, he went to the Board impressed with the desirability of establishing a "Naval Intelligence Department" at Whitehall.[1]

Beside the general disabilities under which any First Sea Lord labours, and those which surrounded Sir Cooper Key, because of the episode described, every First Sea Lord is likely to lose his naval friends in the course of his term of office on account of his exercise of patronage. Under the direct control of the First Sea Lord are great numbers of desirable appointments. In all promotions, nominally made by the Board, but really decided by the First Lord, the First Sea Lord must have a powerful voice. But though this patronage is large, it is sometimes only five barley loaves and two small fishes to the hungry multitude; and the happy one selected for a post leaves a crowd of discontented aspirants behind him. If the known associates of the First Sea Lord in the active service enjoy selection, it is held to be the exercise of an undue favouritism; if the associates are left out in the cold, the First Sea Lord's high position has spoilt him—he has turned his back upon his friends.

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[1] At a later date he changed his mind, and did not support Lord Northbrook in establishing the department. But see next chapter.

Whilst it is only natural that an administrator should have a bias in favour of such men as his personal experience has led him to like and to believe in, the fact is that, at the Admiralty, promotions and appointments follow long debate, formal and informal. Though personal friendship with any Lord or Lords may assist an officer's advancement, there are usually so many claimants to satisfy, that any Lord must show something beside personal friendship in order to carry his man through. A First Sea Lord, however, who enters the Admiralty without leaving many personal friends behind him in the active service, is better off than was Sir Cooper Key, whose popularity was so widespread, and his personal friendships so warm. It is not to be denied that, speaking generally, he was less popular with the navy on leaving the Admiralty than he had been on entering it; and yet he did not escape the taunt that "the bunch of keys" got all the good things.

When the subject of a biography passes into the Board of Admiralty, his public life becomes practically that of the Board, unless he has left behind him diaries or letters sufficient to show how his own acts are differentiated from those of the Board. It is at least inconvenient, until after a generation or two shall have passed away, that departmental discussions exhibiting divergent or concurrent opinions should be made public. But, on the other hand, documents expressing opinions officially may quite properly be used in connection with the history of the time, in order to show what influence the subject of the biography was able to exert over current affairs. Sir Cooper Key was not a writer or a diary-keeper, so that his biographer is not much troubled with the delicate task of publishing, or withholding from publication, matter not originally intended for the public eye. But, even where direct expressions of opinion are not available, the influence of the First Sea Lord upon the decisions of the Admiralty may be justly inferred from what has been recorded of his antecedents.

The new patent, including Sir Cooper Key as First Sea Lord of the Admiralty, was issued on the 12th of August 1879, and the Board then stood as follows:—Right Hon. W. H. Smith, Admiral Sir A. Cooper Key, Rear-Admiral Hood, Rear-Admiral the Earl of Clanwilliam, Sir Massey Lopes, Bart., M.P., with the Hon. A. Fulke Egerton, M.P., as Secretary, and Rear-Admiral Robert Hall as Naval Secretary. In former days it had been the custom to select the naval members of the Board from men whose political views agreed with those of the Government, and it had been common to require that the senior members should hold seats in the House of Commons. That practice was now passing away, and the Naval Lords were not required to hold particular political opinions. Sir Cooper Key rarely expressed any political feelings. Perhaps his sympathies were more upon the Liberal than upon the Conservative side, but he had never done or said anything to mark him as a politician; so that, as it happened, joining a Conservative administration, he held his office when the change of Government took place in 1880.

There was scarcely any public stir about the navy in the latter part of 1879. Naval questions occupied little of the attention of the House of Commons, which was more taken up with the abolition of flogging in the army than with any other service question. These discussions pointed, of course, to similar changes in naval discipline; but that matter was not directly before either the House or the public. So little were the public attracted by naval questions, that there was not in the last half of the year a single leading article in the *Times* on general naval policy, and hardly a letter criticising naval progress. The Army Bill, the Zulu War, the murder of Sir Louis Cavagnari at Cabul, and the subsequent operations there, perhaps drew discussion away from the naval position; so that even the naval war between Chili and Peru, and the capture of the *Huascar*, though reported on, drew little or no attention as bearing on British naval policy.

But in reality the period was one of the most momentous for the navy. It was a turning-point in its material progress. The necessity for decisions of a binding and far-reaching character was forcing itself forward; and if there had been anyone fully cognisant of all the circumstances, and yet free from responsibility in dealing with them, he would have foreseen the subsequent rise of public feeling against the Admiralty, and he would also have seen how really impossible it was for the Admiralty to have avoided it. The period was the eve of a complete revolution in the armament of our ships, and an entirely new departure in design. But, up to the date of Sir Cooper Key's joining the Board, no specific movement, with the exception of laying down the *Polyphemus* at Chatham and the completion of the *Iris* and *Mercury* cruisers, had been taken by Mr. Smith's Board in the matter of new design. Several outside circumstances were, however, inevitably forcing the question to the front. Though little notice was taken of it, the French warship building policy was seriously threatening our naval position. The invention of compound armour was producing important results in resistance to the penetration of shot. In July a plate composed of 9 inches of iron and 5 inches of steel was found capable of resisting three chilled shot of 250 pounds each fired from the 12-ton gun at 30 feet distance, with 1406 feet muzzle velocity. The 100-ton gun was undergoing proofs at Woolwich. The 80-ton guns for the *Inflexible* were in process of completion. These were, of course, the highest developments of muzzle-loading guns, built and rifled on what was called the "Woolwich system." The German gun-makers, Krupp & Co., were rapidly developing a rival system of breech-loading ordnance, and the long barrels that this system permitted, fell in with and encouraged the development of those slow-burning powders which had already been found advisable for use with muzzle-loading ordnance, but which the short barrels of those guns did not give full advantage to. In August the Admiralty sent a committee of naval officers to Meppen to witness and report upon the trials of the new Krupp guns, and there was naturally a good deal of excitement and stir over the really remarkable results of these experiments. The great firm of Sir Wm. Armstrong & Co. was scarcely, if at all, behind in the development of long-barrelled breech-loaders, and much controversy existed between those who defended the Woolwich short-barrelled muzzle-loaders, the supporters of the new steel Armstrong breech-loaders, and the advocates of the Krupp iron breech-loaders. Progress, however, was clearly more in the way of increased energy of projectiles, and therefore of better shooting at long ranges, and more power of penetrating armour, while there was little or no increase of the shell power. If Sir Cooper Key had not changed his opinions since the days of the *Excellent*, they must have been in some collision with the general trend of invention and opinion. The long barrels of the breech-loading guns presented great inconveniences to their use on board ship; and with his ideas of close action, he must have felt it not altogether necessary to improve the shooting and the penetration at long range.

In another way a change was already effected in armaments. The pressure of the torpedo-boat had been so far felt, that one hundred of the Nordenfelt anti-torpedo-boat machine guns had been purchased and were being mounted on board ship.

On the 24th of July 1879 the second series of gun-vessels, built by Armstrong for the Chinese Government, and named the *Epsilon*, *Zeta*, *Eta*, and *Theta*, arrived at Spithead on their way to the East. They carried armour-piercing guns, and the cost of mounting them in that way was very much less per gun than the cost of mounting the same guns in ironclads. On the 28th of July the *Times* published an article on the *Polyphemus* and the Chinese gunboats, pointing to the remarkable threat they held out against the ironclad, and declaring that were it not for the sea-keeping qualities of the latter, the smaller vessels would altogether supersede the large ones as warships.

The *Times*, in describing the vessels on the 25th, had spoken of them as developments of the original *Staunch*. We have seen how, in 1866, the idea of the *Staunch* had emanated from Sir Cooper Key's mind, and how, just thirteen years before he joined the Admiralty, he had recommended the Rendel embodiment of his ideal for adoption.

Immediately before Sir Cooper Key, then, on his joining the Admiralty, was the conduct of three tremendous revolutions. The abolition of corporal punishment; the re-armament of the fleet; and the re-vivification of design which had played itself out on the old lines, and was henceforth to meet new conditions.

But an old Board attached to a moribund Parliament was scarcely the soil for the germination of new ideas. Sir Cooper Key could only have been feeling his way over the new estimates. They were moved by Mr. Smith on the 8th of March 1880; they embraced the modest sum of £10,492,935, and presented no features of novelty. A vote on account was quickly taken, because on that very day Mr. Disraeli had announced the dissolution of Parliament. There were reductions in the votes for stores, machinery, contract shipbuilding, and labour. Sir E. J. Reed complimented the Government on the whole, but taunted it with not having carried out the policy as to a real instead of a paper fleet, as promised by Mr. Ward Hunt. He also complained—and the complaint is significant and important to this memoir—that the Board of Admiralty had not produced a single ironclad of its own design.

Mr. Shaw Lefevre declared that the construction of only 7000 tons of ironclads annually was insufficient to keep the navy on a satisfactory footing. Mr. Smith replied to the criticisms by observing that the Board had devoted itself to the question of repairs, which had been allowed to fall into arrear.

The dissolution, and the elections following, did not bring naval questions to the front. Mr. Gladstone, indeed, had taken occasion, in a counter-manifesto to that of Mr. Disraeli, to denounce the imperial spirit which was to some extent showing itself and had been derisively christened "jingoism." Mr. Cross, in response, contended that the broad issue was whether England was, or was not, to maintain her position.

But though there were these indications of possible changes in public opinion on the great defence question, the divergencies of theory and practice upheld on the Liberal side, together with the moderate and tentative views held on the Conservative side, left public interest in the navy languid. There was no leading article on the navy in the *Times* till the 30th of March, and that was drawn by a letter from Mr. Shaw Lefevre, which was but a party comparison of naval policies. The London water question, and local option, held the stage, both in Parliament and in the country. But on the 9th of April the *Times* again wrote on the navy, comparing Mr. Ward Hunt's declaration with the actual fact that the Board of Admiralty had built no ironclads of its own in the dockyards in six years, and had not completed some already begun.

The sad disappearance of the *Atalanta*, seamen's training ship, was the great naval episode of the time, and, whatever might have been said, it threw a lurid light on the vexed and perplexing question of how the contest between steam power and sail power in men-of-war was to end.

In truth, this question was at the very base of naval policy, for it governed design; and the doubt as to design was—however strangely oblivious the navy and the public were of it—governing the whole naval situation. Sir Cooper Key was in 1866 really taking a very advanced view when he only rated sail power as a necessity for training and exercising the seamen. The vast bulk of the service in 1879 looked on the retention of sail power as necessary to the efficiency of the ships; and some who had strongly upheld the opposite views did not improve their reputations.

At the end of 1879 there were twenty-four ironclads in commission, and their designs were very heterogeneous. The *Warrior*, *Resistance*, and *Hector* represented the earlier type of British ironclads, condemned because of special weaknesses of structure and defective system of armouring.

The *Lord Warden* was one of the survivors of the old converted wooden line-of-battle ships. The *Achilles*, *Agincourt*, *Minotaur*, and *Northumberland* were then considered ships of too great length and displacement to become permanent types, though the navy, had it been polled, would have declared for the *Achilles* as the nearest possible approach to the perfect ironclad. The *Hercules* and *Bellerophon* represented the *Achilles* with her supposed faults corrected. The *Audacious*, *Invincible*, *Iron Duke*, and *Triumph* represented the second-class foreign-going ironclads, of which the *Hercules* represented the first or home-service class.

But, after all was said and done, not one of these fourteen ships was strikingly novel in type, or attempted to break absolutely with the general naval tradition. They were all full-rigged broadside screw frigates cased with armour, but otherwise not greatly differing in type and idea from their wooden predecessors.

The *Monarch* (1868) was the earliest to take a new departure, yet she was only a *Hercules*, with her guns mounted in two turrets so as to fire on either broadside. The *Penelope* (1867) was a special type for a special service; but the *Rupert* (1872), a mastless turret ship, called "an ironclad ram," with only one turret forward, challenged all former types to justify their existence, for she denoted a new kind of battle, and a new system of tactics, of which the navy knew nothing by experience.

The *Thunderer* (1872) discarded masts, but was otherwise a broadside ship capable of firing at least half of her guns in any desired direction. She did not challenge, like the *Rupert*, the position of existing ironclads, except in the matter of sail power, for she was quite ready to take her place with them in any form of battle for which they were prepared. Yet the type was not admitted, chiefly—it can scarcely now be doubted—because it lacked sail power; and the *Alexandra* (1875), a curious form of masted broadside-bow ship, challenged the mastless *Dreadnought* of the same date to maintain her place as an improved *Thunderer*. The *Rupert* spirit in an exaggerated form was in the *Alexandra*: for while the *Thunderer* and *Rupert* got their bow fire without sacrifice of the broadside fire; while the *Hercules* got some bow fire which she could retain as broadside fire if desired; while the *Audacious* class subtracted a little from the broadside fire in order to gain bow and stern fire; the *Alexandra* deliberately put bow-fire on a pinnacle, and made a heavy sacrifice of broadside fire to get it. She could only take her place at a disadvantage in any form of battle which was suited to the armaments of the ironclads that had gone before her.

The novelty of the idea she embodied was followed up and expanded in the *Shannon* (1875) and the *Northampton* (1876), where the armour, which was given to all ships before them as chiefly a protection to the crews of the broadside guns, was, in these, altogether taken away to protect the crews of the bow, or of the bow and stern guns.

The *Belleisle*, which was a purchased ship, was the negation of any approved form of battle. She was equally weak and equally strong in every direction, and was the expression of despair over the idea of any recognised method of fighting at sea.[1]

The newest ship in commission was the *Temeraire* (1876). She was a masted compromise between the *Alexandra* and the *Thunderer*, or rather the combination of the two ideas. The sacrifice of broadside fire was made, no doubt, but it was not so heavy as that which the *Alexandra* had accepted.

Any Board of Admiralty coming into office in 1880, and reviewing the character of the ironclads it found in commission, could only be assured of two things, namely, that there was not the least sign of any type which would stand; and that the tendency was for the fleet to become more heterogeneous than ever. The *Inflexible*, which had been launched in the same year with the *Temeraire*, was almost as far as possible from reconciling the incongruities, for there was no sort of criticism to which she did not offer herself.

The five ships that were building at the close of the year 1879 did not help things in the least. The *Ajax*, *Colossus*, and *Majestic* (afterwards *Edinburgh*), were small *Inflexibles*, while the *Conqueror* was a larger *Rupert*. And then there was the *Polyphemus* "torpedo-ram," which was a plunge into an arena with a new naval heaven and a new naval earth, as far as warfare was concerned.

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[1] Yet, literally, she fulfilled Sir Cooper Key's idea of 1866. See p. 369.

There was little more sense of steadiness in type amongst the cruisers. The boldest departure before 1879 had been in the cases of the *Iris* and *Mercury*, laid down in 1876. In these ships sail power had been reduced to a minimum, in order that there should be a very high proportion of horse-power and coal supply. But it was so little foreseen that they were then approaching the type of the future cruiser, that they stood in the Navy List under the somewhat contemptuous title of "Despatch Vessels." When Sir Cooper Key first joined the Admiralty, the *Mercury* was undergoing steam trials which showed even better results than those obtained in the *Iris*. Early in September she had a six hours' run at an average speed of 18.6 knots—higher than had ever before been obtained over so long a period in a man-of-war. But it was impossible then to say that this pair of ships was going to beat the handy full-sail-powered vessels of the "C" class out of the field. The *Canada*, the *Constance*, and the *Cordelia*, ships of this class, were not yet launched; and they, with their 13-knot speed, and their 470 tons of coal, were regarded by almost the whole naval world as infinitely more precious as types, than these novelties in the form of "Despatch Vessels." It we drop below the class of cruiser at that time, to that of the gun-vessel and gunboat, we find the latest type in the *Algerine*, masted of course, with 10½-knots speed, and said to be capable of steaming 1100 miles.

I dwell upon the condition of design because I believe it was that which really governed the whole situation, and because, later on, it was the shipbuilding programme and policy of the Board of Admiralty, of which Sir Cooper Key was the naval leader, that was chiefly challenged. The interest to the biography is that Sir Cooper Key was necessarily at the head of the revolutions that were then effected, and that we are in a position to compare some of his thoughts on these matters at an earlier date, and to trace them into substance in these later years.

Between 1866 when he left the *Excellent*, and 1879 when he went to the Admiralty, he had had certain sea experiences. He had been afloat in the *Bellerophon*, one of the most effective attempts to combine the sailing ship and the steamer in an ironclad. He had commanded a squadron largely composed of unmasted turret ships. While in this command, in July 1878, he wrote in these terms:—

"I was much surprised on taking command of the fleet to find it so formidable as regards ships, officers, and men. The turret ships, once in the Baltic or Mediterranean, would be a splendid addition to our strength. I first took the Reserve ships to Portland, where the turret ships joined me. I exercised the squadron there in harbour drills, etc., and went out four times with the turret ships alone, nine of them. They steered very wildly at first, but latterly they handled them well. All the turret and gun gear worked well; battering charges did no damage. We had slight trouble with the steam-steering gear of two of them, but they can throw it out of gear quickly, and we found a cause and remedy for the trouble. The Admiralty would not let me take the turret ships, or even *Thunderer*, for a cruise with the Reserve ships. I wanted to take them short stages, and manœuvre the eighteen ships together; but they have sent me here" (to Bantry) Bay "with eight ironclads; and making this our headquarters, I shall go out for short cruises."

Now, if we turn back to 1866 for Sir Cooper Key's frank ideas as to what the ironclad and the cruiser of the future ought to be; if we consider what, to his open mind, the best attempt to combine the sailing ship and the steamer in an ironclad actually came to; if we imagine how his thoughts must have been affected by those concrete entities the Chinese gunboats, the *Iris* and *Mercury*, the growing numbers of the torpedo-boats, and the Nordenfelt machine guns, we can almost sketch out what the forthcoming policy of design would be, so far as he had power to influence it.

His ideal ironclad in 1866 was to be of moderate length, not more than 300 feet; she was not to be encumbered with engines and boilers beyond what was required for 12½-knot speed; her water-line should be protected by a belt of 8 inches of iron; a deck of 1-inch iron, with wooden planking, should connect the upper edges of this belt. The rudder should enter below the water-line; the steering gear, except the wheel, being protected by the belt. The armament on the gun-deck was to consist of heavy guns on slides, 12-ton guns in the midship ports, and lighter guns towards the extremities. On the upper-deck she was to carry two guns on a turn-table before the foremast; two others, similarly mounted, abaft the mizzenmast. Only rifle protection was to be afforded to the men working the guns, but the rollers and training gear of the turn-tables were to be protected as much as possible by the upper-deck beams and deck. He hoped that the advantages of retaining the full rig of ships for the training of seamen would not be forgotten, but even as early as 1866 he did not go so far as to insist that the ironclad should be rigged. In the earliest days of the ironclads he had seen how the tide was setting against the attempt to make them sailing ships. The *Thunderer* had not been conceived when Captain Key wrote in 1866, but when he went to the Admiralty he had been several times at sea with his flag in that ship, and knew very well what she was. He knew also what the endeavour to maintain a modern fleet under sail came to.

In 1878 there had been laid down by the French, at Toulon, a ship called the *Caiman*. She was 278 feet long, and had a speed of 14½ knots. She carried a single 42-cm. breech-loading rifled gun at the bow, and another at the stern, each mounted *en barbette*, and she further carried on each broadside, between the barbettes, two 10-cm. guns, beside machine guns. She was heavily armoured by a water-line belt 19½ inches thick amidships, and tapering in thickness towards bow and stern. The middle part of the ship, between the barbettes, was further protected by a steel deck 2.8 inches thick. Evidently, there was in this ship some approach to that general ideal which had been in Sir

Cooper Key's mind in 1866—not, however, more than this.

She gave a sort of hint to the constructors at the Admiralty, and, before Sir Cooper Key joined the Board, a new design, based indeed on the *Caiman's* hint, but yet differing widely from her, and, by as much as she differed, approaching more nearly to Sir Cooper Key's ideal, was in process of completion there.

The ship was the *Collingwood*; and allowing for the changes of time, and the influences on Sir Cooper Key's mind already alluded to, the description of the ship sketches nearly that of his ideal ironclad in 1866.

She was of moderate length, as length was then considered—325 feet. She was not perhaps of such moderate speed, but still her speed of 15.7 knots was moderate in comparison with the 18.0 knots of the *Iris* and *Mercury*. Her water-line was protected by a belt which, though it exceeded 8 inches in thickness, was proportionately moderate at 18 inches in view of the advances made. This belt was closed in at the top by an armoured deck which, though it exceeded 1 inch, was, at 2½ inches, proportionate to the changes that time had developed. The rudder entered below water, and, though the belt did not extend abaft so as to protect the steering gear, other armoured means of protection were employed. With regard to the armament, there was for the first time in the navy the particular disposition of the guns which Key had named in 1866. Two guns at bow, and two guns at stern, on turn-tables, and a strong broadside armament as well, between them. It is true that in the end the adoption of the French breech-loading system brought out the *Collingwood* with 43-ton breech-loading guns at bow and stern, with no heavier than 6-inch guns on the broadside; but perhaps the initial design with muzzle-loading guns was much closer to Key's ideal than the final one came to be. The broadside guns were protected according to Key's ideal, that is, not protected at all. The bow and stern guns were protected by barbette and other armour, but Key had required that some protection should be given to the turn-tables and the machinery for working them. Hydraulics had greatly increased the quantity and importance of this machinery, and as by its means the crews of the guns were very much diminished, we can imagine the admiral concurring in the change as a natural development of his principle. So we can understand him as now definitely concurring in the abandonment of sail power for the first-class ironclads, and then we have the *Collingwood* as the nearest approach possible at the new date, to the ideal ironclad sketched out at the old one. Two points differed: the under-water armoured deck before and abaft the belt was novel, and was none of Key's. He had always protested against the system of conning-towers, but inertia and the designer had been too much for him. The *Collingwood's* conning-tower had to be submitted to.

But this ship, the *Collingwood*, was not laid down till the 12th July 1880, and was not launched till the 22nd of November 1882. Until she was tried at sea—which did not happen till May 1884—where was the proof that she was any more destined to lead the way and become a type proper to be repeated and expanded, than the *Thunderer*, the *Alexandra*, or the *Temeraire* had been?

With regard to cruisers, the designs for the *Leander* class were probably complete when Key joined the Board. Three of them were laid down in 1880. They were in essence improved *Irises*. About the same size, shape, and force, but dropping one-eighteenth of the speed of the *Iris*, in order to extend, by taking every advantage of improvements in the marine steam-engine, the radius of action, their coal capacity was increased from 780 to 1000 tons, and their nominal steaming capacity from 4400 to 11,000 miles at 10 knots. A further advance was made in the matter of armour. The *Iris* had no protection from armour. The *Leander* class had a protective steel deck of 1½ inch thick over the magazines and machinery. Sail power, to the minimum amount allowed in the *Iris*, was present in the new design. The system of armouring was new to Sir Cooper Key, yet it was really a modification of the low water-line belt with armoured deck attached, which he had advocated in 1866. The ships were dignified by the title of "cruisers," yet it could not be said that the bulk of the navy, even at the date of their launch 1882–1883, was clear that they were killing sail power.

The Conservative party being beaten at the polls, Mr. Gladstone formed a new Government, Lord Northbrook becoming First Lord of the Admiralty. His Board was formed on the 13th of May 1880, and consisted of the following members:—The Earl of Northbrook, Admiral Sir Cooper Key, Vice-Admiral Lord John Hay, Rear-Admiral A. H. Hoskins, and Mr. T. Brassey, M.P. Sir Houston Stewart was Controller, but not a member of the Board, and Rear-Admiral F. A. Herbert was Director of Naval Ordnance.

It is not easy, writing in 1897 when the navy estimates have exceeded those of the army, and have stood at nearly twenty-two millions of money, and when the only tendency the country has shown is to urge further and larger expenditure, to recall what the state of feeling was when the new Board was formed. But it is significant to remember that when Sir Geoffrey Hornby went about to establish the compact between the three leading admirals, it was not an increase of naval force that he was aiming at, but a certain reorganisation of the administrative machine. The Board now came into office with a navy not superior to that of France alone, either in ironclads or in cruisers; and with no general feeling either in Parliament or in the country that this was not as it ought to be.

The fact had been, that as long as considerable numbers of the war admirals remained alive, the country was kept by them in a state of instinctive consciousness of the peculiar vulnerability of these islands, and the necessity of maintaining impenetrable naval armour. But after these had passed away, there was no way of preserving that consciousness but by the writings and speeches of naval officers who had closely studied history and were capable of applying its lessons. But there were no such writers or speakers for many years, and, after the Reform Bill had set up a passion for economy and retrenchment, it was almost a matter of course that the navy should be made the principal subject of it. A check to expenditure was more easily applied to the navy than to any other department. Even after the establishment of the continuous service system, by which the State was bound to retain the services of men for not less than ten years, great reductions in expenditure could be at once effected by paying off ships, discharging workmen, and ceasing to purchase stores.

Only ten years before Lord Northbrook's Board came into office, Mr. Childers, with the full approval of the mass of public opinion, set reduction of expenditure opposite to the maintenance of naval force, and decided against the latter. But this method of dealing with the navy had for many years blinded even the navy itself to its true position. The navy distrusted the navy, and, as we have seen, Sir Cooper Key himself had looked to military forces as at least a possible alternative to its defensive power. Hence, when he came into office, the knowledge that the armoured navy of France was equal to that of England, and that her policy appeared to be to increase it, created no such alarm in any minds as could later be created by discovering that the battleships of England were not very much superior to those of France and Russia combined.

Take together these sentiments, and the fact that no type of what are now called "battleships"—the descendants of the old sailing "line-of-battle ships"—had been or could be decided on, and there is before us ample reason why Lord Northbrook should have been three years in office before announcing a distinct increase in the output of ironclads.[1] I have no reason to doubt that Sir Cooper Key was, up to a certain date, entirely in accord with this waiting policy, and though it was bitterly complained of later, it was practically inevitable, and had been going on for several years without special challenge.

The accompanying lists of the ironclads laid down in England and France between 1876 and 1880 is inexplicable, except on the grounds stated.

The heterogeneous character of the purchased ships had been more than ever a wet blanket to design, and, though the *Collingwood* was about to lead the way as a type offering signs of permanency, her success was a matter of almost entire speculation.

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[1] Mr. W. H. Smith in the House, in August 1880, stated that this was the difficulty which had beset him when in office.

ENGLAND.	FRANCE.	ENGLAND.		FRANCE.
1876.		1878.		
Ajax.	*Turenne.*	*Neptune*	Bought by Vote of Credit.	*Terrible.*
Agamemnon.	*Devastation.*	*Superb*		*Duguesclin.*
	Bayard.	*Belleisle*		*Requin.*
	Foudroyant.	*Orion*		*Indomptable.*
				Caiman.
1877.		1879.		
	Amiral Duperré.	*Conqueror.*		*Formidable.*
	Tonnant.	*Edinburgh.*		*Vauban.*
	Furieux.	*Colossus.*		*Amiral Baudin.*
		1880.		
		Collingwood.		

Undoubtedly, the gun question had followed up the sail question in blocking design and giving it pause. The French had settled their gun because they had had the good fortune to begin upon a good system of breech-loading; while we, having begun with a bad system, were forced back into muzzle-loading, and would have retained that system had it not been discovered that the highest velocity, and therefore the better shooting and greatest penetration of armour, could only be obtained by long barrels and slow-burning powder.[1]

Lord Northbrook's Board came into office with the possible change back into a sound system of breech-loading staring it in the face. Though there was not a single gun on the proposed new system—which was in all essentials borrowed from the French—in the navy when the Board took office, it was beginning to be seen that muzzle-loading would be given up. Some hindrance to the production of a settled design for battleships was clearly thus offered, but the retardation could not have approached that which was due to the question of retaining sail power, and of how ironclads should be prepared to fight.

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[1] See Chapter XVI. p. 380.

Before the first year of office had run out, the Board had come to the conclusion that it would be necessary to considerably increase the rate of building armour-plated ships which had prevailed. But still the type proper to proceed upon in the case of new ships was a matter of doubt and perplexity. The French type, where there were isolated armoured barbette towers generally containing single heavy guns placed at the ends and sides of the ships upon the upper-deck, with broadside batteries of lighter guns, entirely unprotected by armour, upon the deck below, did not commend itself to the English naval mind, yet, in the sort of despair which possessed us, the new Board turned somewhat towards the French system. The *Warspite* and *Impérieuse* were laid down in 1881, and were again a new departure in British design, more nearly approaching the French than either the *Thunderer*, *Alexandra*, *Conqueror*, or *Temeraire*. It was intended to adhere to sail power in these new types, and it was only after they were approaching completion that the utter incongruity of the proposal was realised, and sail power was given up in the last of the armoured ships to which it was attempted to apply it. There was this to be said for adhering to the idea of sail power for the two ships: they were intended chiefly for service abroad, following up in this respect the idea of ships of the *Triumph* and *Iron Duke* design. Though it had been clearly proved that sail power in such ships was the reverse of economical, the notion of saving coal by the use of sails had been so impressed on the naval mind for a long course of years, that it was as yet absolutely impossible for it to shake the delusion off—absolutely impossible to conceive of a navy entirely discarding sail power.

However uncertain the future of armour-plated design might be, the activity of France had to be met. Though public opinion on the subject was inert, and the Admiralty itself could hardly be expected to start a propaganda of alarm, even substantial equality between France and England in this respect was a menace to political peace. France laid down the *Hoche* in 1881, which, even when the

Impérieuse and *Warspite* and also the purchased ships were counted, still left us four ships behind in the constructive race started in 1876. On the other hand, the considerable advance which France had been making in her rate of shipbuilding, had, until 1881, been sustained by loans. These ceased in 1881, and there was the appearance of a drop in the pace kept up. The Board of Admiralty, however, must have felt that a certain risk had been incurred which should not be incurred again. Instead of resting satisfied with the disparity of force they found when they came into office, they thought the opportunity had come to get rid of it without unduly exciting the public mind. In considering the design of the *Collingwood*, it must have been admitted that, except in the matter of sail power, she had all that was being demanded by the possibly unsettled naval opinion of the day—unless, indeed, it might criticise the particular system of armouring adopted. Though the time had not yet arrived when the impossibility of applying sail power to the *Impérieuse* and *Warspite* was fully admitted, the extreme difficulties in the way could not have escaped notice. There was no design before the Board which was more likely to perpetuate itself than that of the unlaunched *Collingwood*. Suppose a bold policy were adopted? Suppose it were assumed that the time had come when diversities of type were to cease, would it be made less likely by the frank abandonment of sail power?

We have seen how little removed the design of the *Collingwood* was from Key's ideal of 1866. Further consideration of that type did seem to show that, given the abandonment of sail power, it met the conditions of the day. The bold hypothesis was adopted. Though the first of the type was still on the stocks, four more ships of the same type—larger, more powerful, and understood to be improved in many ways—were laid down in 1882. The whole five ships were named after distinguished admirals, and were thereafter spoken of as the "Admiral" class.

At the time, little note was taken of this very great step in advance. Even at this day (1897) it is scarcely remembered that this is the step which made possible, and led up to, our present great battle fleet, and that never before had so many as five first-class ironclads of a definite type been on the stocks together. The only decision approaching this in moment by any former Board—and for this another distinguished Sea Lord of the Admiralty, the Right Hon. Sir John Hay, was responsible—was the laying down of the four ships of the *Iron Duke* class and the two of the *Triumph* class in 1867. But no real comparison can be drawn between the two decisions. The *Iron Duke* and *Triumph* groups were only intended as second-class ships, and the only absolute novelties in them were the adoption of the twin screw in combination with full rig, and the upper-deck battery with its bow and stern fire. In the *Admiral* class there was the definite parting with sail power, the rejection of the tactical ideas brought to a climax in the *Inflexible*, and, above all, the definite adoption of the long-barrelled breech-loading rifled gun. Without question, we must say that we owe the *Admiral* class, and all that has followed, in great part to the enterprising and yet well-balanced mind that then governed the naval part of the Council at Whitehall.

It was the same in regard to the policy for cruisers. The temptation to pursue traditional policy—great sail power, short length for handiness, moderate speed, and moderate radius of action under steam, and moderate displacement—may perhaps have been yielded to in 1881 by laying down the ships of the *Calliope* type, where there was a displacement of 2770 tons, a length of 235 ft., a breadth of 44 ft. 6 in., a speed of 13.75 knots, and a radius of action under steam of 3840 miles at 10 knots. But Captain Key, in 1866, had asserted that "great speed was indispensable" for cruisers. They might be "rendered much more formidable by a water-line belt and iron deck; but he would in no instance place armour-plating elsewhere than on the water-line." True, there was the sail power to be considered, but that was the thought of fifteen years ago. The results he had sought were approached in the *Iris*, and almost reached in the *Leander* class, where the sail power had dropped to insignificance. The bold but consistent step was taken in 1883–1884, when the *Mersey* and three other like ships were laid down. In these ships sail power was definitely abandoned; they were to have "only two pole masts for signalling." They were *Leanders* carried to their natural conclusions in view of Captain Key's ideas in 1866. There was a slight reduction in displacement, and a considerable reduction in coal supply; but *per contra* there was the bow and stern armament of one 7-inch breech-loading gun to each; there was at least a knot more speed; and there was the armoured deck over the whole horizontal area of the ship, which in the *Leander* was only partially covered.

In this case, again, it is not sufficiently borne in mind that Sir Cooper Key might have influenced a backward step, and, were we without evidence the other way, it might still be averred that his opinion had impeded the advent of the *Mersey* class as the type of cruiser which has since been only developed. As it is, we are assured that Sir Cooper Key's influence must have been wholly on the side of the forward step, and that with his usual balanced judgment he had parted with prejudice in consonance with the facts before him.

Nor must it be forgotten that a further bold innovation was faced in the design of the *Scout* in 1884. This ship was the first of the torpedo vessels. "She was designed," said Mr. Campbell-Bannerman in March 1884, "for the employment of the Whitehead torpedo, and, in fact, she represents the cheapest vessel that can be produced for this service with the speed I have named (16 knots), and with sea-going qualities." This novel type was greatly followed up; and whether it has been supplanted by still more novel designs may yet be held uncertain. Her features were very pronounced. She carried the maximum number of torpedo-tubes that had ever been put into any ship—seven. Her gun armament of four 5-inch breech-loading guns, together with an abundant supply of machine guns, was by no means insignificant for her size, while, for her size, the speed of 16 knots was higher than anything that had yet been done in ships of her displacement. She was, of course without armoured protection of any kind; it had never been applied to vessels so small where even moderate speed was looked for.

The *Scout* was the recognition of the torpedo in a sea-going and sea-keeping ship as her primary and not her secondary armament. This recognition was combined with another which had been for several years circulating round the torpedo-boat, namely, that a battle fleet was no longer self-defensive against torpedo attack. Some kind of ram or torpedo vessel was, it was considered, a necessary protector for the valuable and powerful battleship.

Sir Cooper Key, as it happens, has left behind him a paper on these two questions, which represents perhaps the most advanced opinion he ever expressed on naval problems. It was so much in advance that it probably met with little or no response from his colleagues; and though two vessels of the class were announced to form part of the Northbrook programme at the end of 1884, the designs were never published. It was dated early in his career at the Admiralty, the 13th of September 1880, and its importance appears to me so great that I quote it in full:—

"I am strongly impressed with the necessity of providing another description of torpedo vessel differing from, and in addition to, those already built or building.

"We require sea-going torpedo vessels to be attached to every squadron, which would be capable of accompanying the squadron to any distance in any weather—vessels that, having sufficient speed to overtake an ironclad, would not fear to receive her fire when approaching or passing her, to launch a torpedo if her water-line and vitals were protected by a steel deck.

"I am aware that the *Polyphemus* is a vessel of this description; but the vessels I contemplate would be less costly than she is, and be more serviceable as cruisers and as habitations, though the gun armament should be subordinated to the torpedo.

"It is necessary that the torpedoes be discharged below water, as otherwise she would be incapable of running the gauntlet of an enemy's fire without great risk of her torpedo armament being disabled.

"The vessel I propose should have 16 knots speed;[1] should carry coal sufficient to accompany a fleet; have four or five submerged tubes for torpedoes, a very light armament of guns and machine guns, a steel deck below the water-line covering the engines and boilers and torpedo-room. Two conning-towers well protected against machine-gun fire, and she would require but limited accommodation for her crew. I am of opinion that, in the existing condition of torpedo warfare, no squadron can be considered efficient without one or two such vessels being attached."

This anticipation of a class of vessel in 1880, which may be said to have put in an appearance for the first time in 1896, is a remarkable instance of forecasting. At the same time, the peculiar character of Sir Cooper Key's mind is disclosed in the memorandum. He stopped short in the achievement of the immediate object, and did not consider what the result would be when the achievement was complete. The ironclads were not able to defend themselves in the conditions of modern war. Something was to be provided to defend them; but no consideration was given to the entirely novel situation of the line-of-battle ship, which was liable to be beaten by something which was not a line-of-battle ship.

The *Scout*, we may fairly assume, was the practical outcome of the theoretical memorandum of 1880; but this question of defending the ironclad against something that was not an ironclad was never lost sight of by the Board, and before it went out of office a design for a vessel "to accompany fleets to protect them against attack by torpedo-boats" was ordered to be prepared. She was not to draw more than eight feet of water, so that she should not be subject herself to attack by the Whitehead torpedo.

Something is to be said, however, on the other side, which would again point to that characteristic of caution in advance, which may have shown itself in the earlier days at the Admiralty more than it did in the later ones.

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[1] The *Collingwood* was then the only ironclad designed for 16-knot speed, and no French ironclad was designed for more than 15-knot speed. The fastest was the *Devastation*, of 15.17 knots.

In March 1882 he wrote a memorandum on "The best Type of small Unarmoured Vessels for the Navy," the substance of which it is interesting to set out, in view of what has since been done.

It had been objected, he said, to our policy in this respect, that our small vessels had not speed or coal-endurance enough to be of full service in war; and he proposed to examine the question. It would be allowed that though our smaller cruisers fell short of the speed of merchant steamers, and of some lightly-armed foreign cruisers, yet, in respect of speed, coal-endurance, armament, and accommodation for men, the vessels now building were an improvement on their predecessors.[1] He argued that the change of speed must be to 14 or 15 knots, if it were to be effective as desired. Such a speed could only be got by increasing the length and decreasing the breadth; storage of coal must be decreased, and masts and sails reduced; cost would be increased 50 to 60 per cent. Numbers must in consequence be reduced.

The result in the training of our officers and men would be disastrous. If the 60 or 70 sloops and small vessels, etc., now kept at sea, were replaced by full-powered mastless steamers, the check to the training in seamanship, tactics under sail and steam, pilotage, gunnery, and the ordinary duties of a ship of war, would be very great.

"In other respects," he said, "we must also bear in mind that, in time of war, vessels of existing types, capable of steaming 11 or 12 knots, and carrying a comparatively heavy armament, will be available for the performance of many important duties in rivers and in-shore waters where high speed is not necessary, but where an efficient armament would be. We must not let officers and men forget that ships of war are built and equipped for the purpose of fighting, and that they are bound to meet all comers of similar size without endeavouring to escape."

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[1] Alluding, doubtless, chiefly to four ships of the *Racer* class of 950 tons, 850 horse-power, and 11.0 knots speed. Perhaps also to three ships of the *Caroline* class of 1420 tons, 950 horse-power, and 13.0 knots. Possibly to three ships of the *Albacore* class of 560 tons, 600 horse-power, and 11.0 knots.

He thought that for the class of swift, lightly-armed, heavily-coaled vessels which was desired, it would be better to fall back on the mercantile marine in war, and to persevere in the policy then existing. Nevertheless, he proposed to meet the demand to some extent, and suggested a design for a composite twin-screw vessel of about 1100 tons.

Not impossibly, the *Basilisk* class of sloop of 1140 tons, 2000 horse-power, and 14.7 knots, was the outcome of this paper, as they carry similar armaments to that of the *Racer*.

I suppose that the apparent discrepancy between the advanced conceptions already noticed, and this grudging admission of change, may be explained partly by the effect of experience on Sir Cooper Key's mind,—this paper being so much prior to the later one quoted,—and, in part, from some conception of the special duties falling on ships of what are called the "sloop" class. It had for long been the practice, and it still exists, to give these vessels a much heavier armament in proportion to their size than other ships. Engine power was deliberately sacrificed to gun power; and locomotion, in consequence, was held to rest properly on sails. Quite a recent type, the *Algerine*, laid down in 1894, holds to the old idea, and ranks in a general survey as thirty-eighth in displacement, twenty-second in proportionate locomotive power, but second in proportionate gun power. Sir Cooper Key may have only been protecting a special class of ship, and not attacking speed as an element necessary to small ships as well as to large.

In this view of naval progress in the matter of design, it is impossible to resist the conclusion that the Board, headed by Lord Northbrook, and technically advised and influenced by Sir Cooper Key, which was commonly thought at the time, and is still looked back on, as being somewhat supine, did, as a matter of fact, take more decided steps than perhaps any Board that had preceded it. And in the steps then taken every Board has since been treading.

I have already noticed how the Board was met by the gun difficulty the moment it went into office. Things, in fact, were, at the beginning of 1880, just on the turn, and the final decision must have really rested in the hands of the Admiralty. The decision—of course with the concurrence of the War Office authorities—was final in respect of breech-loading guns, and, as is well known, has never been reversed since.

In furtherance of the decision, the Ordnance Committee of military and naval officers was established in March 1881, and, before the Board left office, designs for 16.25-inch, 13.5-inch, 9.2-inch, and 8-inch breech-loading guns were worked out, besides improved 6-inch, 5-inch, and 4-inch guns. There was not, as has been said, a single breech-loading gun of the new type in the service when the Board came into office, and yet there were 594 such guns available when it left office. All the new designs of ships were altered to suit the new guns, and a vigorous system of replacing muzzle-loading by breech-loading guns was set in motion.

During the tenure of office of the Board, 22 new ships, with an aggregate displacement of more than 43,000 tons, were completely armed with 164 breech-loading guns; fifteen old ships, carrying 124 muzzle-loading guns, were re-armed with breech-loaders; while 21 ships were in course of being armed or re-armed with 211 of the new guns.

Before the Board came into office, machine guns were almost unknown. There were a few Gatling guns and the 100 Nordenfelts, but nothing more. The machine gun was now made a definite part of the ship's armament: 1366 were in use or available when the Board went out of office, and 500 more were due before the end of the financial year.

With regard to torpedoes, the Board found about 500 of a non-obsolete pattern; they added 250 to the stock, gave orders for 150 more, and arranged for an additional source of supply in case of pressure.

It was not until the autumn of 1884 that the feeling in regard to our naval position, which has possessed the country ever since, began to arise. Sir Cooper Key had for three successive years pressed strongly for the addition of another million to the £10,480,000 of 1882–1883, the £10,750,000 of 1883–1884, and the £10,812,000 of 1884–1885, to be spent entirely on shipbuilding. But the country and the navy were apathetic about the matter, and the Cabinet overruled in each case.

It is not possible that Sir Cooper Key's real attitude towards the navy, as represented in the Board to which he belonged, can be understood unless the current of public opinion is in some degree set out and measured. I have already spoken of that divided duty which lies before the First Sea Lord; how the particular and the general duties may clash, and the extreme step of resignation dictated by the one may be absolutely forbidden by the other. Sea Lords before Sir Cooper Key had taken the extreme step, and sometimes—notably in the laying down of the six ships of the *Triumph* and *Iron Duke* types—with complete effect.[1] But in such cases the Lords must have felt that they had a strong public, or at least naval, opinion to back them. And moreover, their position, to be effective, must have been consistent. They could not have pursued a steady course of policy for several years, and have suddenly broken loose from it and taken a violent plunge in a particular direction. Reviewed from the historical standpoint, as we are now able to review it, the whole policy of Lord Northbrook's Board was rapid advance in every proper direction. The complaint made against it in 1884 was, that it did not suddenly respond to the sudden application of a spur, which the country and the navy had only fitted to its heel then, and for the first time. The Admiralty horse had been, up to that time, crossing the country at a fair hand-gallop, and the rider held a loose rein, with unspurred heel and no whip; it was blamed because it did not adopt, suddenly, steeple-chasing pace.

No doubt, the navy was not without its witnesses demanding greater things through the four years during which the work of Sir Cooper Key and the Admiralty had made it possible to demand and carry out a "programme." These witnesses were Admiral Sir John Hay and Lord Henry Lennox, both of whom were in the House of Commons, and both of whom had been in the Admiralty. But the country and the navy allowed them to beat the air, and were never in the least affected by what they said.

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[1] "Early in March (1867) we (that is, Admiral G. H. Seymour and Sir John Hay) refused to sign the estimates, and tendered our resignation."—*Lines from My Log-Books*, by Sir John Hay, p. 262.

In tracing the current of public opinion, we shall find it nowhere so perfectly reflected as in the columns of the *Times*; and nowhere is that reflection so concentrated and defined as in its leading articles. Their number and their nature in relation to any particular subject is a complete gauge of the strength and direction of the public opinion bearing on it.

In February 1879, then, we find the *Times* congratulating the country on the drop of one and a half millions that the Navy Estimates showed. In March it repeats these congratulations, and, though it claimed that economics must not leave the navy weaker, it commended the shipbuilding programme as "suitable and moderate." Then the navy is put aside until July. In July, as already mentioned, attention is called to the striking possibilities which the creation of the *Polyphemus* and the Greek-lettered Chinese gun-vessels indicated. Obviously, such reflections, coming in at a time when no type of ironclad existed which might be made permanent, could only retard the progress of design. Early in 1880 we have reflections on the fighting powers of merchant ships and their support of the navy; repairs and new shipbuilding could not, it was said, be carried on together unless estimates were "portentously increased." It was tempting, on the eve of a general election, to assail naval policy, but it was not justified.

Then the navy was dropped till June, and we were told that there was no room for discussing the moderate estimates of the late Government, and that Lord Northbrook's Board found no change necessary. As a fact, at the time, Sir Cooper Key was finding every change necessary, and was in the full swing of it. Colourless articles on the bombardment of Batanga by Commodore Richards, and on the naval demonstration at Dulcigno, summed up the notice taken of the navy for the year.

Mr. Trevelyan, in moving the Navy Estimates for 1881–1882, based the Admiralty policy on the conception that "a good ship armed and afloat was better than an ideal ship on the stocks." It was a faint indication of the puzzle which was at the bottom of shipbuilding policy; and when he went on to say that the Board might have notions of their own as to the ironclad of the future, but found plenty of work in completing their predecessors' designs, he put the matter more clearly. Before any great increase in warship building could be set up, a momentous decision had to be taken, yet there was no better basis for such a decision than there had been any time within the last ten years.

The *Times* in its article complained that we had been for years reconstructing the navy, and were reconstructing still. But it seemed to attach blame to the fact that there was controversy over type, and did not recognise it as inevitable. Yet at the same time it spoke of the *Polyphemus* as "perhaps destined to work a revolution in naval warfare."

The intention of building the *Impérieuse* and *Warspite* was announced, and the feature adverted to was the furnishing them with breech-loading guns said to have become more powerful than the muzzle-loading guns of the *Thunderer* and *Devastation*. The expressed determination of the Admiralty to re-arm the navy with breech-loading guns was claimed as a marked advance, but the appointment of the Naval and Military Ordnance Committee, which was the machinery for carrying out the tremendous change, was spoken of in somewhat slighting terms. The pith of the article, however, may be said to be a balancing between the policies of new construction and the repair of old construction, which had in a sense come to be the naval party watchwords of the Liberals and the Conservatives.

In April 1882 two notable changes were made at the Admiralty, which showed how much the question of *matériel* was governing the situation, and how ready the Board really was to face it. The Controller was made a

Lord of the Admiralty as well, and an Order in Council was obtained creating an additional Civil Lord, "who should possess special mechanical and engineering knowledge as well as administrative experience," to "assist the Controller in the business relating to the *matériel*" of the navy. Mr. George Rendel, from the firm of Sir William Armstrong & Co., Sir Cooper Key's friend, the worker out of Sir Cooper Key's idea of the *Staunch* class of gunboat, and the originator of the Greek-lettered Chinese gun-vessels, was appointed to the new post. We must take it, that if Sir Cooper Key did not initiate the proposal, he heartily concurred in it; and it is almost obvious that, in making such a change at such a time, the Board was a long way ahead of public opinion on the condition of the navy.

After this there was a lull in naval discussion until August. Sir John Hay, in the House of Commons, had directly raised the point of our naval weakness. The *Times*, truly mirroring public opinion, made light of it. It deprecated a larger expenditure on shipbuilding, and objected to a too close counting of ships and guns. Jervis and Nelson, it observed, never did such things, and, in the doubt that must hang over naval battles, numbers might not count for much.

Early in January 1882 Lord Henry Lennox and Sir William Armstrong had made speeches on the naval position, which the *Times* characterised as "somewhat disquieting"; and expressed dissatisfaction that there was "nothing more reassuring" than a speech in reply by Mr. Brassey. But by April this slight tremor of doubt had passed away. Lord Henry Lennox was told that he might as well complain of want of attention to his statements in regard to the weakness of the navy, as the shepherd who was always crying wolf might complain of the deaf ears on which his cry fell. It was said that he was calling "for more ironclads, as Sir John Hay had called before him, and as our naval experts had always been in the habit of doing." "The art of the alarmist," it went on, "consisted in putting forward fancy figures and then arguing as if they were correct." It would have been impossible to employ such language had there been the slightest hope that a move at the Admiralty would have been responded to in the country. It is clear that the Board was pursuing the only policy open to it.

In September 1882 there was an article pointing out how the rapid advance of naval science hindered progress in completing ships on the stocks, as it was necessary to alter their design in order to bring them up to date. The *Calliope* was instanced as having been given one knot more speed while in process of construction. The opportunity was not lost of again ridiculing the case of the alarmist, and of once more claiming that in the ships of the Mercantile Marine an efficient auxiliary to the navy would be found.

In March 1883 Lord Henry Lennox once more drew attention to the state of the navy in the House of Commons, and, in commenting on the debate, the *Times* continued to make light of the naval question. The debate was of a character with which we were familiar. The onslaught was irresistible till the defence was developed. It was not necessary to suppose that the most powerful fleet or ships would be certain to secure victory,—witness the battle of Trafalgar. The comparisons between our force and that of France were faulty. It might not be inexpedient for the House of Commons to debate these questions, but they became more and more difficult for anyone but experts to deal with. "Nothing could be more satisfactory than the declaration of Mr. Campbell-Bannerman, that the Government accepted, as the basis of naval policy, the principle that our naval supremacy must be upheld." The policy which had placed Mr. Rendel in office was warmly approved by Mr. Smith in the House, and there was reasonable confidence that the navy was being, and would be, kept up.

As there was no other leading article on the general state of the navy throughout the whole year, it is pretty evident that there was not, even to the end of 1883, any really strong feeling as to the naval position in the mind of the country, or any reason why a Cabinet traditionally bound to consider economy as of primary importance, should allow the Admiralty to force its hand in the matter of expenditure.

The Navy Estimates, therefore, for 1884–1885 scarcely exceeded those of former years. It is perhaps historically worth while to summarise the financial and shipbuilding policy of Lord Northbrook's Board up to the opening of the financial year 1884–1885, which marks the time when the country began to awake. The ordinary estimate for 1881–1882 was £10,725,919; for 1882–1883, £10,483,901; for 1883–1884, £10,752,300; and for 1884–1885, £10,811,770.

The ships laid down stood as follows: for 1881–1882, two armour-clads aggregating 14,780 tons, and ten unarmoured ships aggregating 13,330 tons—a total of twelve ships with a displacement of 28,110 tons. The total expenditure on shipbuilding and ordnance for that year was £3,777,241.

For 1882–1883 the ships laid down stood as follows: four armour-clads aggregating 32,400 tons, and one unarmoured ship of 950 tons—a total of five ships with a displacement of 33,350 tons. The expenditure on shipbuilding and ordnance was £4,213,644.

For 1883–1884 the ships laid down comprised one armour-clad of 10,000 tons and six unarmoured ships, aggregating 8770 tons in all—a total of only seven ships of 18,770 tons. The total expenditure on shipbuilding and ordnance for the year was £4,407,287.

For the year 1884–1885 the original proposals for the year were to lay down one armour-clad of 6200 tons and seven unarmoured ships of 16,310 tons—a total of eight ships aggregating 22,510 tons. The estimated expenditure on shipbuilding was to be £4,792,817.

These figures show us that for the five years—counting to the summer of 1884—during which Sir Cooper Key had represented the navy at the Admiralty, there had been practically no increase in the expenditures, and therefore to a hasty judgment, such as a suddenly-alarmed public forms, there had been no progress at all. We have seen that in reality the whole navy had been transformed; and that, for the armour-clad and the cruiser, types had been furnished which were, for the first time since the introduction of armour, capable of governing construction for a long course of years.

But mutterings by those who had not the whole case before them, as we have now had it, arose, multiplied, and gathered force as the year 1884 rolled on. Towards the summer something like clamour against the Admiralty took form. In the month of July Lord Sidmouth drew attention to the state of the navy in the House of Lords, and Lord Northbrook, in replying to it, made use of an expression which was perfectly explicit, plain, and correct, but which, separated from its context, was made to bear a construction entirely foreign to its meaning, and which is to this day preserved as a reproach to that Board of Admiralty, but especially to the First Lord and to the First Sea Lord.

Lord Northbrook said: "The question for the public to consider was, what ships were actually being built in France and in England. The fact was, that in 1883 we had laid down eight ships to the French four; and up to the present time we had laid down one ship, and the French none. Therefore, so far from overstating the case with regard to the proceedings of the Admiralty, he had rather understated them. When the noble Marquis said that it would be desirable that the Admiralty should have an unlimited amount of money to spend on the present type of ships of war, he felt bound to say that he was not of that opinion. *The great difficulty the Admiralty would have to contend with, if they were granted three or four millions to-morrow for the purpose referred to, would be to decide how they should spend the money.* Anyone who had paid attention to the progress made in the construction of guns must be aware that the guns put on board the newest type of ships would be able to destroy any armour which could be put on a vessel. We were now obliged to leave portions of our vessels undefended, and to protect only certain vital parts. In every new ship the armour had to be thicker, and, unless the vessels were built of a larger size, a great portion of them must be penetrable. Therefore the difficulty at the present time was whether it was desirable to increase the number of those enormous ships of war; and that was a difficulty felt not only by our Admiralty, but, as he knew, by those who had to conduct the affairs of other countries. Then there was another consideration which made it doubtful whether it would be wise to spend a great sum of money now upon such ships. Some of the best naval officers in this country thought that, in the event of another naval war, the torpedo would be the most powerful weapon of offence, and would be able to dispose of the most formidable ships in the service of this or any other country. Therefore it would be very imprudent greatly to increase the number of these enormous machines."

Sir Cooper Key left behind him, amongst his papers, a long memorandum, unsigned and undated, which is a powerful exposition of the views mentioned by Lord Northbrook, which it is not possible to read without sharing in the hesitation that was felt. It seemed to show that, unless nets should prove a more efficient defence than in cases they had done, the position of ordinary warships attacked by torpedo-boats was almost hopeless. The experience of the Federals was—even before the Whitehead torpedo came into play—that no discipline would stand the continued strain of expecting night attacks.

The experiments tried from time to time both by British and foreign navies demonstrated that torpedo-boat attacks at night, on fleets at anchor or at slow speed, ought generally to be successful. A foreign opinion of weight on experimental attacks by torpedo-boats on warships in daylight, assumed that they could only be repulsed by gunfire when no more than one boat attacked one ship. The same authority was of opinion that night attacks, properly conducted, should always be successful. In another foreign experiment in daylight, three torpedo-boats were found sufficient to destroy one ship which had had full warning.

Experiments with the electric search-light showed that great care was necessary in its employment, or it might be a distinct danger.

It was doubtful whether too much had not been made in favour of machine-gun fire, of their power of stopping the approach of torpedo-boats. Proof was offered that most of the hits scored experimentally were scored far within torpedo range, and that, if the firing had ceased as soon as the approaching boat got within torpedo range, hardly any hits would have been scored. Foreign experiments showed that two quick-firing 47-mm. guns could only expect to hit a torpedo-boat approaching at the rate of 18 knots once, before she got within torpedo range. The general protection to engines and boilers offered by an approaching torpedo-boat was such, that so light a gun would be ineffective to stop her even if the shell struck. It was not safe to consider that, under the most favourable circumstances, a single gun could stop a single torpedo-boat before she got within torpedo range.

The mixture of the defending fleet's boats with those of the enemy, in darkness or hazy weather, would be fatal to the defence, as the fire would be hampered, and would tell on its own boats.

Booms and nets were, in fact, the only available defence by warships against torpedo-boat attacks, and even they were uncertain in their preventive powers.

Sir Cooper Key has not left behind him any available record of his own personal views of the question. All that can be said is that the conditions very much disturbed him.

Whatever might have been the case at the moment, the words given in italics were presently seized upon to denote that in the opinion of the Admiralty—and therefore of Sir Cooper Key—there was already a plethora of naval force, and that no more money was wanted. Whereas it is obvious that Lord Northbrook was only summarising what has already been said, namely, that the question of type was so uncertain that any hurried expenditure would most likely be wasted.

The proof is absolute that Lord Northbrook was right.

Not one of the types which the hurried programme introduced has since been repeated.

The storm burst in September, when the *Pall Mall Gazette*, on the 15th, published an article headed, "What is the Truth about the Navy?" and on the 18th another headed, "A Startling Revelation"; and then followed it up by the series of powerful statements and arguments entitled, "The Truth about the Navy. By one who knows the Facts." Those who were most conversant with naval affairs at once blazed up, truly and seriously alarmed. Mr. W. H. Smith wrote a letter to the press, referring to the statements of the *Pall Mall Gazette*, which was published on the 23rd. In this he declared that inquiry into the naval position had been evaded by setting party against party. The real question was, he said, "Whether we had a fighting fleet which could dispose of any probable combination of forces which could be brought against it in battle; whether our food supplies, our trade, and our commerce were reasonably secure from interception by an enemy? Whether, in point of fact, we were strong enough to make it in the highest degree improbable that an attack shall be made anywhere, and impossible that such an attack could be successful?" Mr. Smith repeated the demand for Parliamentary inquiry, which Sir John Hay had so fruitlessly urged from the beginning of the session.

The *Times*, in its leader on Mr. Smith's letter, was evidently not certain how the country would go. It balanced considerations. How was it that Mr. Smith expressed no opinion of his own, whether the anxiety was well founded or not? It was not right of him to have moved unless he had an opinion. But then, it was no answer to say, as Mr. Campbell-Bannerman had done, that some of the responsibility rested on Mr. Smith's own shoulders. The *Times* had every confidence in the Board of Admiralty, but it was necessary to remember it was under the control of the Treasury. On the other hand, statements made by Mr. Campbell-Bannerman and Mr. Brassey had not allayed anxiety. The "Government must not shrink, from mistaken motives."

The *Times* was not wrong to be cautious in its expressions. The area of the storm was very confined. On the 20th October Sir E. J. Reed published four columns of criticism on the untried designs of warships, and attacked Sir William Armstrong's proposal to rely upon fast unarmoured cruisers only.

The *Times* adverted to the real difficulty of design, and all it could say was that we "must not cease to build ironclads because scientific shipbuilding was progressing and constantly changing." But even then, the *Times* declared, the nation treated the affairs of the Admiralty with "careless and complacent indifference."

Meantime Lord Northbrook had undertaken the difficult task of putting the affairs of Egypt, which had now practically passed under the protectorate of England, into order, and was absent at Caïro. Nothing could be done till his return.

He was back before the 10th of November, and in a speech at the Guildhall on that evening had promised to profit by the advice and criticisms tendered. He admitted that it was desirable steadily to increase the strength of our armour-plated ships; secondly, to increase the number of swift cruisers for the protection of our commerce; and thirdly, to pay greater attention to the element of speed in the construction of the smaller class of vessels. The next day Mr. Gladstone promised an official statement with regard to the navy; and Mr. Brassey, at Fishmongers' Hall, referred to "proposals" that were then under consideration.

Such, then, was the history and inception of the "Northbrook programme," which, had it been put forward before the public expression of feeling, would certainly have been scouted as a mere exaltation of the naval leather by the naval shoemakers, but which was now to be scouted as insufficient.

It was here, perhaps, that Sir Cooper Key's unpopularity in the navy rose to its height. There is no doubt at all that his contemporaries on the Flag List regarded him as weak and time-serving, and claimed, if they did not personally urge, that he should have resigned rather than be a party to a policy about which the navy itself, for some five years, had been practically silent.

But even now it seemed as if it was not the steady course which had been pursued for five years at the Admiralty which was censured, but just that a much larger programme was not immediately set forth.

The Admiralty proposal, made in December 1884, was to spread over the next five years an expenditure on shipbuilding of £3,100,000, in addition to the ordinary estimates. There were to be built by contract, with this money, two first-class ironclads, five armoured cruisers, six torpedo cruisers, and fourteen torpedo boats. The mere fact that none of the types proposed in the programme have since been followed is almost an answer to the whole question from beginning to end. It shows that the unsettled state of design, which was either not alluded to or placed in a subordinate position, was, so far as the Admiralty was concerned, the great obstacle. It may not be denied that the Cabinet of those days had no just appreciation of the naval position, and forbade even reasonable expenditure; but had there been no question of type, the backbone of the opposition to expenditure would have been broken.

The ships built under this suddenly devised programme were the *Victoria* and *Sans Pareil*; the cruisers *Australia*, *Galatea*, *Narcissus*, *Orlando*, *Undaunted*, *Immortalité*, and *Aurora*. The torpedo cruisers were the *Archer*, *Brisk*, *Cossack*, *Mohawk*, *Porpoise*, and *Tartar*.

The storm which raged in naval circles outside the Admiralty reached Sir Cooper Key's ears. On the 2nd of December he wrote thus to Sir Geoffrey Hornby, who was then Commander-in-Chief at Portsmouth:—

"I am told that it is rumoured at Portsmouth that I am opposed to an increase of the fleet. I wish to disabuse *your* mind on the subject. If you had seen what I had written, heard what I have said at the Board, you would know how I have been disturbed about the absurdly small sum the Government are asking for; and you will not find it will be said in either House that the First Sea Lord considers the proposals sufficient. I have protested against them as insufficient. I have scarcely slept for the last five nights, having been so worried about it. I write to you, as I should much dislike that the service should suppose I concur in what has been asked for. But it is made a Cabinet question, and I have had my say, which is recorded. We are losing a good chance. I could not judiciously resign on the point, as we have had no more reason for that than we had three months ago." Sir Cooper might have better said five years ago, for our naval position was not now weaker, by comparison, than it had been then. If there was blame anywhere, it was not blame on account of the state of the navy, for that had only greatly improved. Such blame as there might be, rested on the Cabinet, and consisted, as Key put it, in "losing a good chance," which the sudden outbreak of alarm had put in its hands.

He was pressed again upon his position, as I very well remember, at the time, and on the 5th of December he wrote:—

"I have not read either Lord N.'s or Brassey's speeches, but, as I told them clearly that they could not state that I or the other members of the Board were satisfied with the proposals, they could not have intended to infer that we were. On Wednesday, after the debate, Lord N. told me that he was not properly reported in that respect.

"I have a very lively sense of the responsibility of Naval Lords, in spite of the Order in Council which proposes to relieve us from it. Our power lies in resigning if we think any vital question is carried against our opinion. I remain here" (at the Admiralty) "very loosely just now. I have a house preparing for us in Berkshire, to which I will *gladly* retire when I feel it right, or am compelled to do so. I have made two measures vital ones during the past three years as regards myself, and had determined to go if my advice had not been followed. It would, therefore, not take much to induce me to go if I found that loyalty to my chief involved disloyalty to the service. But it is not so now.

"Before this scare came I had written two strong confidential letters—one on the defence of our coaling depôts abroad, which was sent to Lord Hartington, and bore fruit; the other on the necessary increase of the navy estimates. I asked for an additional million a year for additional ironclads, torpedo vessels, belted cruisers, and other matters. I believe now that if this sum is added and increased in future years we shall be placed in a proper position. I have always deprecated asking for a very large lump-sum for shipbuilding purposes. It will only induce other nations to make another start. When I found the feeling of Parliament and the country, I advocated a large expenditure, and was very much disappointed when we did not get it. But now we have got our half-loaf, which is about what I originally asked for, I cannot say that I resign because the press has gone beyond that, although I much regret that we did not go beyond it also.

"I believe that if our successors maintain the expenditure we have ensured for the next few years, we shall have no reason to doubt our position in the future—unless the other countries go ahead; then we must go farther ahead also.

"We have now twenty-seven ironclads in commission. The French have eleven. We could commission thirteen more within a month. I cannot find that the French have more than two ready, and one of these has boilers condemned (*Richelieu*), but of course she is ready. Many of our ships are of obsolete types—so are many of the French. However, they, being of wood, cannot last long.

"I should have no fear whatever of war with France and Russia *now*, so far as our navy is concerned, but I *do* fear that our relative strength in five years' time will be much too nearly equal for safety."

Sir Cooper Key, therefore, was practically in accord with Lord Northbrook as to the objection to large and sudden expenditure. If the extreme step which had been suggested to him had been taken at all, it ought to have been taken in 1881. But it is clear that no one then would have suggested it, and if he had taken it, the navy would merely have shrugged its shoulders at him. Now there was nothing to go on. It was better to take money while the country was in a spending humour, but in reality what had been wanted was the pushing on of the new experimental types and pausing in construction until it was known how they would turn out. It was impossible to be satisfied with an arrangement that was to have a *Hero*, a

Victoria, and a *Sans Pareil* under construction beside a *Collingwood* and an *Admiral* class.

Sir Cooper Key's career as connected with the material part of the navy has now been traced, and the saying that the child is father to the man has been once more verified. It is probable that no naval officer who ever lived had more influence over this department of naval policy than he had. It is evident that his personal views were consistent and continuous. One point may very easily be forgotten in thinking them over. Naval material progress is governed by opinion, and it does not even follow that what is discarded is truly set aside, or that what is advanced merits the foremost place. A great deal of the material progress made was initiated and followed up by Sir Cooper Key. Some of his thoughts have not yet taken root; some have been set aside.

That remarkable conception of the swift *armoured* torpedo vessel, which may have been suggested by the *Polyphemus*, has not yet been realised, though armoured torpedo-boat destroyers are actually afloat now. In that profound matter of the type of gun and gun-ship for battle, Sir Cooper Key's conception of the high shell-power rather than long-range penetration has fallen through, and with it, of course, his conception of close action. Is this partly because of his failure to connect high speed necessarily with the short-range weapon; or has the torpedo enforced the long-range in men's opinions?

The belted first-class cruisers of the *Australia* type may be said to have been nearest Sir Cooper Key's ideal of any that had been built, but we have never repeated the belt in the cruiser until this year (1897).

Yet, if we study the general drift of Sir Cooper Key's mind over these questions, it is not easy to say that his views were wrong, or that they will never be revived.

In the machinery of administration the chief work of Lord Northbrook's Board was the establishment of the Intelligence Department; and it is very remarkable that, having joined the Admiralty with a distinct feeling in favour of it, experience should have made Sir Cooper Key an opponent to its establishment. His fear was lest it should encroach on the territory of the First Sea Lord, and absorb some of his functions. He was a desperate worker, and had a dislike to trusting what he thought his own business to others. Probably, he soon found that his fears were groundless.[1]

There were grave doubts as to what the result of the abolition of flogging in the navy might be, and at first the alternative sentences pronounced by courts-martial seemed very severe. Lord Northbrook has kindly allowed me to say that he attributes the ease with which the changed system passed into action as greatly due to Sir Cooper Key's care in examining every case, and his steadfastness in recommending that the exercise of the prerogative of mercy should be confined to cases that really deserved it.

While Sir Cooper Key was in office the whole of the measures adopted towards the personnel were in the direction of amelioration and settlement of difficulties. There were few ranks that were not touched by them.

It is not generally remembered that the plan of colonial naval defence adopted by the Australian Colonies, which, though incomplete, is nearer to a true method than anything we have had elsewhere,[2] is due to Sir Cooper Key's initiative, and it was he who gave to Admiral Tryon the instructions he so ably carried out.

His memorandum on it was dated 28th October 1884. He based it on the belief that it was both our duty and our interest to assist the Colonies in the defence of their ports and their commerce to the utmost of our power. It is clear that at this date Sir Cooper Key was impressed by a belief in attacks on colonial ports, which had scarcely precedent in the history of naval war; yet he advocated getting away from the idea of strictly colonial and strictly localised naval forces, and took up with the more elastic arrangement that was afterwards brought into being in Australia by the ability and tact of the late lamented Admiral Sir George Tryon.

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[1] The change of view was the more remarkable, as before Sir Cooper Key went to the Admiralty he had written to Mr. W. H. Smith, the then First Lord, to urge the establishment of an Intelligence Department.

[2] But if the proposal of the Cape Government, to contribute an annual sum to the cost of the navy without conditions, is carried out, that will be still nearer the ideal arrangement.

CHAPTER XVIII

AT THE ADMIRALTY AS AN EXECUTIVE—1882–1885

IT is remarkable that while a much greater call than common was, as we have seen, made upon the Board of Admiralty, of which Sir Cooper Key was the naval head, for administrative decision and work, its executive capacity was tested on several occasions to an unusual degree.

Early in May 1882 the rebellion of Arabi in Egypt had reached a point which brought England and France together in considering what steps should be taken in regard to it, both nations having such great interests and so many of their citizens in the country. By the 11th of May it was agreed to put pressure on the Sultan to intervene and restore order by landing troops; but, instead of taking note of the advantageous position he would have secured by accepting and acting on the invitation, the Sultan raised difficulties. It was then agreed, after some hesitation as to taking overt action before the intervention of the Porte, that two French and two English ironclads should go to Alexandria to guard the lives and interests of the several populations. On the same day, the 11th of May, the Admiralty telegraphed to Admiral Sir Beauchamp Seymour, then in command of the British Fleet in the Mediterranean, to prepare two ironclads not drawing too much water to enter the harbour of Alexandria, to proceed thither when ordered. On the 12th Sir B. Seymour reported that the *Invincible* and *Monarch* would be ready. There was constant negotiation with the French, and constant telegraphing, because of the necessity then existing for absolute identity of action; and it would seem as if the position of the French

Government at home had been so precarious that it could not venture to act with that clearness of vision and resoluteness of purpose which dictated the English action.

At the Admiralty, our immense stake in the safety of the canal was the governing factor; and it fell out, partly in consequence of the question being a naval one, that Lord Northbrook, as First Lord of the Admiralty, with Sir Cooper Key at his side with complete technical knowledge and grasp, had necessarily to take the greater part in almost every detail of the action adopted.

The full work done by the Admiralty of that day, and its immense weight in council, will surely be dwelt upon by the future historian. Everything went with such perfect smoothness, promptitude, and regularity, so far as the Admiralty was concerned, that the public and Parliament of the day were scarcely aware of the debt that they owed to the Board, and especially to its political and naval heads.

By the 13th of May it was the opinion of the Government, especially at the Admiralty, that Arabi might try some violent *coup-de-main*. The French and English Ministers at Alexandria desired the support of ships, and Sir B. Seymour was ordered to proceed with his fleet at once to Suda Bay in Crete, whither coal was quickly despatched to meet him. Time and circumstance pressed heavily. We were quite ready to act, but the extreme delicacy of the international situation hindered us, and made our slightest movements the subject of grave discussion. But on the 17th of May a definite telegram went to Sir B. Seymour at Suda Bay, ordering him to proceed at once to Alexandria with one ironclad and two smaller vessels, the French proposing to do the like; and Sir B. Seymour was to have ready to follow, a second similar detachment.

The same day the British admiral sailed with his flag in the *Invincible*, accompanied by the *Bittern* and *Falcon*; the French admiral with his flag in an ironclad, and also with two small vessels, sailed with him, all bound for Alexandria. Before he left, Sir Beauchamp Seymour telegraphed to the Admiralty the exact position of every ship under his command.

But Arabi's movement went on in increasing strength, and France vacillated as to the proper mode of treating it. The danger to the canal and to British life and property grew. The forts surrounding Alexandria harbour covered our ships at anchor there, and were being strengthened in a manner which became a distinct threat.

On the 5th of June it was arranged to send the whole of our Mediterranean Fleet to Egypt; and on the 14th to support it by sending the Channel Fleet, under the command of Vice-Admiral Dowell, forward to Malta. The hopes of inducing the Sultan to intervene seem at this time to have been small; but as an encouragement, our Government offered to transport and land his army in Egypt. Sir Cooper Key was in communication with the military authorities, and Sir Garnet Wolseley in particular, as to the situation, and his opinion was that before landing troops at Alexandria it would be necessary to silence the forts, which could be done, though not without loss, by four or five ironclads. That then the troops, having been embarked in ships of sufficiently light draught, might be landed under cover of the warships' guns, on the beach near the British Consulate. Alexandria might thus be occupied; but, on account of the Nile floods, a march thence to Cairo would be difficult. As Cairo would probably be the objective, the true method of proceeding was to make Port Said the rendezvous for the transports, where, if they exceeded convenient draught of water, the troops could be transhipped into lighter craft and carried to Ismaïlia. Here, the east end of the fresh-water canal could be secured, and the troops being landed might follow its course in the march to Cairo. The troops should not be less than 20,000 in number, and should be embarked in ships not drawing more than 25 feet of water. Port Said and Suez must be taken and held; and the canal must be secured by an ironclad at Ismaïlia, and from four to six gunboats, with three fast torpedo-boats patrolling its waters, while 2000 to 3000 troops patrolled the banks.

The capture of Alexandria might also be effected by a repetition of Sir Ralph Abercromby's operations in 1800. The landing at the west extreme of Aboukir Bay, or near

Lake Mareotis, the troops occupying an isthmus only one mile broad, would prevent the escape of the army of Alexandria if a fleet at the same time occupied the harbour.

It was necessarily on the Admiralty that the weight of the Egyptian question, naval and military, rested; and no one studying the annals of the time can fail to see how the old thread of naval history was picked up, spun, and drawn out, if with different materials, still in like manner and with the objects pursued of old. As it was always the protection of "the trade" which came first, and dominated all in the naval strategy of one hundred years ago, so it was the protection of "the trade"—but this time through the canal—that dominated at the Admiralty, and thence governed the great decisions of the State.

Every point, indeed, which the existence of the canal raised in international diplomacy was necessarily under review. The question of the neutrality of the canal had never been settled. The very basis of the concession for constructing it was that: "Les approches du canal, les ports qui en dependent, ainsi que les eaux territoreales de l'Egypt seront egalement à l'abri de tout fait de guerre." Russia, when pressed to declare herself in 1877, had agreed that the canal was an international work in which the commerce of the world was interested, and which should be kept free from attack. She had pledged herself neither to blockade nor in any way menace the free navigation of the canal. The British Government then, in declining to make more definite proposals, contented itself with calling on the Porte and on the Khedive to preserve its freedom. But in practice the Government had gone somewhat further than this, in putting quietly a naval watch over the canal traffic. But now it was the basis of the whole thing that was threatened, the canal itself: first, by the Bedouins, acting for Arabi, or merely for plunder; and secondly, directly by Arabi, for his own purposes. It was growing hopeless to expect any aid from the Sultan in this direction; and if the Khedive had the will, he had not the power. Then, too, was the exceedingly delicate situation as regarded France. But, on the other hand, no blow to British commerce so great as the blocking of the canal could be allowed; and whether France took our initiative action ill or not, the Admiralty must have been impressed with the consideration that no time was to be lost.

About the 23rd of June orders in accordance with these views went to Sir Beauchamp Seymour. The ships in the harbour of Alexandria were to remain there, and with the rest of the fleet were to be prepared to land seamen and marines, with field-guns, to the assumed number of 2000. Two ironclads were, however, to be kept off the coast, ready for emergencies, and with their crews intact. 1000 marines, under a lieutenant-colonel, were to be added from England. It was intended to occupy Port Said, Ismaïlia, and Suez; and then an ironclad was to be stationed at Port Said, a ship in the Bitter Lakes; and the force off Suez was to be reinforced by another vessel. Enough vessels were to be provided for the efficient patrol of the canal. In furtherance of these arrangements, Admiral Sir Wm. Hewett, who commanded on the East India station, was ordered to Suez with some of his ships.

One of the difficulties likely to arise was water-supply, and for this purpose a steam water-tank was to be sent from Malta, and a condenser capable of distilling twenty-seven tons a day provided. It was ordered that vessels entering the canal were to carry machine-guns in their tops, and rifle-proof shields for the shelter of the guns' crews were already being prepared at Malta. The first step of all was to occupy Port Said without delay.

Meanwhile Arabi's party continued to strengthen, to increase, and to arm the works which covered our ships in Alexandria harbour, and no possible object could be in view but preparing to open fire on them. Notices were sent to Arabi, pointing out that the thing could not be allowed to go on. Assurances passed, but there was little or no check to the work. Sir B. Seymour was authorised to open fire upon the works if conditions named were not adhered to. Things grew rapidly to a head. About the 5th of July it was decided to forward two battalions of troops to Cyprus, and to commission Rear-Admiral Hoskins, then one of the Lords of the Admiralty, to take charge of the defence of the canal.

These things were all put in training at once; but, however rapid the decisions were, and however steam and telegraph facilitated their speedy execution, facts ran too fast for them.

The situation was entirely anomalous. Arabi being in rebellion against our ally the Khedive, it was a question whether we should simply look on at the certain success of the rebel, whether we should make terms with him, or whether we should destroy him. It was a further question whether we should decide for ourselves, or let France decide for us, or continue to negotiate while Arabi was making his position stronger every hour. Except for the canal, the matter might perhaps have been no business of ours. With the canal, it was impossible for us, however it might have been for France, to run any risks; and there was no guarantee for the canal's safety under Arabi's rule. It was an Admiralty matter, and from the Admiralty came the spirit that guided the whole thing. In the first week in July Sir Beauchamp Seymour was directed to inform the military governor of Alexandria that any attempt to block the channel would be a hostile act. The continued increase in the power of the forts went on all the same, and on the 5th of July Sir Beauchamp Seymour proposed that he should demand the cessation of this work, under penalty of his opening fire. The Government at home approved, with the proviso that the French admiral should be invited to co-operate. Yet the die was cast, and if France held back we should go on.

Admiral Dowell, at Malta, received orders to prepare the Channel ships for the reception of troops, and on the 7th of July the admiral reported that the military had received orders to embark, that his ships would be ready at noon next day, that the *Hecla* and *Achilles* would start for Alexandria that evening, and that the *Agincourt* and *Northumberland* would embark the men.

On the 9th Sir Beauchamp Seymour reported that he would give the foreign Consuls notice at daylight next day, and open fire in twenty-four hours later, unless the forts on the isthmus and those commanding the entrance to the harbour were temporarily surrendered, for the purpose of being disarmed. Sir Beauchamp Seymour was informed, by way of reply, that all the ships, including the *Tamar*, with the marines, at Malta, were at his disposal, and that he could use the *Tamar* for troops as soon as the marines were removed. On the 11th the latter ship, having on board the battalion of marines already mentioned, was ordered to proceed to Limasol in Cyprus; and later, Sir B. Seymour reported that he had silenced and destroyed the forts.

What is striking in this narration is the important part that the Admiralty took in every detail of the business; then the promptitude with which decisions were arrived at, and the speed with which action followed. We do not trace a single hesitating or backward step on the part of the Admiralty; and Lord Northbrook has more than once told me that it would have been almost impossible to have conducted the business in the way it was done, had it not been for Sir Cooper Key's complete technical knowledge, his quickness of apprehension, the speed with which his mind was made up, and his staunch adherence to the views once expressed.

But, as is well remembered, the troubles only began with the bombardment of the forts at Alexandria. For a few days Sir Beauchamp Seymour could not guarantee the freedom of the canal, and his stoppage of the traffic called forth strong protests; then the civil authority in Alexandria collapsed. Through all these troubles the Admiralty steered with a clear head and a firm hand. On the 14th of July it undertook to protect the canal by means of the navy alone. It had given its officer on the spot, Rear-Admiral Hoskins, who had been sent out as second in command, such instructions as enabled Sir Beauchamp Seymour to telegraph, on the 13th, that the canal traffic was going on as usual; and such was the care on all sides as to the susceptibilities of the French, that on the 18th their admiral wrote to Sir Beauchamp Seymour, how the conduct of the captain of the *Iris*, Captain E. H. Seymour, at Port Said, had assured him that England was only at war with the partisans of Arabi, that she respected the Khedive's authority, and preserved the neutrality of the canal. The anarchy at Alexandria was met by authorising Sir B. Seymour to land the seamen and marines of the fleet; and the admirable manner in which that service was performed, and the speed with which order was restored in the ruined city, are on record.

From the Admiralty everything was pushed forward. On the 14th Admiral Dowell proceeded in the *Minotaur* from Limasol to Alexandria. Troops were advanced from Cyprus on the 15th. On the 16th Sir B. Seymour had landed every available man, but wanted at least 3000 troops besides the 1000 marines in the *Tamar*. For, as soon as order was restored in Alexandria, Arabi's army was found to be investing it on the land side. The delicacy of the international situation was great; for we had to restore peace and order, while making it clear to other Powers that we were forced to do it, and were not taking advantage of our position to occupy Egypt prematurely. Troops were being pushed on, but there was some difficulty about the commander, and on the 16th Sir Beauchamp Seymour was informed that whoever the military officer appointed might be, he was to take his instructions from Sir Beauchamp, as representing Her Majesty's Government. Such an order was perhaps almost without precedent in the annals of British joint naval and military operations.

A few days later the position was defined in a message to Sir Beauchamp, informing him that though the military commander had no authority to operate beyond the defence of Alexandria without his instructions, yet once those were given, the responsibility, in a military point of view, rested with him.

Sir B. Seymour, on his side, was uneasy. The position was one requiring the utmost caution. The men landed were overworked night and day, and it was absolutely necessary that they should return to their ships. By the 18th of July the House of Commons was becoming restless and threatening.

But now the strain was almost over. On the 18th Sir Archibald Alison, who had been placed in the military command, reported that the South Staffordshire Regiment and the battalion of marines having been landed, they had relieved the crews of the ships nearly along the whole line. He was informed in reply that two battalions would be sent to him from Malta. The final proposal, through the Admiralty, was that the Major-General should be put in charge of the police at Alexandria and the defence of the city, with two battalions from Cyprus, one and a half battalions and artillery from Malta, and 1000 marines from the *Tamar*. Then the whole of the landed crews might return to their ships, which would thus be freed to operate in the canal. This was still the chief subject of anxiety, and Sir Beauchamp was desired to reinforce Admiral Hoskins with ships and marines, if it were possible to do so. Sir Beauchamp replied that these arrangements would exactly meet the case; that he had landed three weeks' provisions for the men on shore, and was obtaining provisions and rifle ammunition from Malta. The General and he worked together in the most cordial spirit.

The situation as regarded France was clearing. From the first the Government had used their utmost endeavours to co-operate with the Government of France in all the measures taken, and M. de Freycinet, who was the French Prime Minister, agreed to join in the protection of the canal; but this was not settled till the 16th of July, when Captain Rice was sent to Paris to make arrangements with the French Minister of Marine, and Admiral Hoskins was authorised to act in concert with the French admiral. On the 29th of July M. de Freycinet's Government was defeated in the French Chamber, and resigned office. The result was the complete withdrawal of France from all action in the business of destroying Arabi's rebellion and restoring the authority of the Khedive; and as it was the doubtful concert with France which more than anything else tied our hands, there must have been great rejoicings at the Admiralty when the English Government was compelled to act independently.

By this time the navy may be said to have fulfilled its independent mission. It was holding Alexandria, Port Said, and the canal, while from the other side Sir William Hewett was holding Suez. The way was clear for the military operations that followed, and which took the form proposed by Sir Cooper Key and the military authorities conjointly, for the advance of the Turkish army had it been landed.

It was not till the 13th of September that news reached the Admiralty of the battle of Tel-el-Kebir; and next day the news of the capture of Arabi ended the first stage of the Admiralty dealings with Egypt, and allowed the Board to rest from its labours.

Before passing on, it may be well to give Sir Cooper Key's views as to the position of the canal in war, which I have been able to collect from his papers. He thought that there were three modes of dealing with the question. First, leaving matters as they stood, which would permit the canal to be treated like any other waters of a neutral State. But this appeared to be an anomalous position in which to place Egypt, as she is debarred from fortifying the entrances and banks; she cannot therefore be responsible for not permitting an act of war to take place in her waters.

Free passage might be permitted to all vessels of war or commerce during war, under the restrictions proposed for neutral harbours, and under the support and guarantee of the Great Powers.

Or, the canal might be closed to belligerent ships of war. This would exclude also munitions of war, which would involve great difficulties on the part of Egypt as to searching ships, and the carriage of coal, etc.

On the whole, Sir Cooper Key was of opinion that the second proposal was the only one practicable.

At a later stage of the Egyptian troubles, the Admiralty was called on suddenly as an executive body, and acted with remarkable speed and precision.

Before the defeat of Baker Pacha's ill-disciplined force near Trinkitat, five miles south of Suakim, there was fair reason to believe that he would be able to raise the investment of Tokar and Sinkat by the Soudanese, and relieve the garrisons.

Admiral Sir William Hewett was then at Suakim with the bulk of the ships of the East India squadron. The news of Baker's defeat reached the Admiralty at 2.30 p.m. on the 5th of February 1884. Hewett reported that the Egyptian troops left in Suakim were utterly unreliable, and that he was landing men to defend the place. The Admiralty immediately telegraphed approving, and asking what reinforcements he would require? But the great question at once arose—Would it be possible to get troops into Suakim in time to relieve the garrisons of Tokar and Sinkat? The answer given and the steps taken not only exhibit the great capacity of the Board, of which Sir Cooper Key was a member, but the extraordinary power we have of dealing with unforeseen emergencies, and the unlikelihood of our being struck at so suddenly as to preclude our immediate recovery.

The situation was this. The *Jumna* trooper was expected from Aden with some 1400 troops on board. The *Orontes* trooper was approaching Suez with about 1000 seamen and marines from China; some at least of these might be rapidly available. Egypt could furnish British troops, but it was a question whether it would at that moment be safe to withdraw them. There was a special difficulty here. General Gordon was then on his way from Korosko to Berber. Until news of his safe arrival there reached the Egyptian Government, it was impossible to part with British troops, which might be required for immediate action if anything happened to him on the way. On the other hand, the seamen and marines of the Mediterranean Fleet could temporarily relieve the garrisons of Alexandria and Port Said, and the Channel Fleet, then at Cagliari, might be hurried up to Egypt in about five days. Lastly, there was Malta, from whence troops might be pushed forward.

Orders by telegraph flew from the Admiralty in rapid succession. The *Orontes* was caught in the canal; the *Jumna* on her way thither. Transport was taken up in Egypt. Admiral Lord John Hay at Malta, the Commander-in-Chief of the Mediterranean Fleet, was warned to be ready to reinforce Sir William Hewett at Suakim. The *Carysfort*, at Alexandria, was ordered to take men from *Orontes* and carry them on. The *Jumna* herself was ordered to Suakim. Sir William Hewett's proposal to withdraw the dangerous remainder of Baker Pacha's force was approved; and he himself was invested with full powers, civil and military, to act at Suakim. The Government heard of Gordon's safe arrival at Berber on the 11th, and the way was then clear.

The general result of all was this. Sir William Hewett had on shore, at Suakim, 350 English and 500 black troops, the English chiefly seamen and marines. The *Carysfort* was to arrive there with 227 seamen and marines on the 13th. The *Jumna* was to arrive on the 15th with 1130 British troops. A transport was to be there on the 18th with 800 men; another was due on the 19th. The *Orontes* was due the same day with 1270 more, including 370 marines; while two smaller vessels brought up 300 British cavalry.

Thus 5381 men had been concentrated upon Suakim, not, properly speaking, between the 5th of February 1884, when the news of Baker's defeat reached home, but really between the 11th, when Gordon's safe arrival left the Government free to act, and the 20th, when the force was concentrated at Suakim. It was not in time to save the garrison of Sinkat; but the battle of El-Teb was fought on the 29th. Tokar, though it had surrendered to terms about 25th February, was reoccupied on 2nd March, and the garrison relieved and brought away.[1]

The Admiralty played a less prominent part in the advance upon Khartoum, which was unhappily too late to effect its object. The Admiralty surveyed the Nile route, and gave its opinion against it. As the Nile route was ultimately taken against the Admiralty advice, and especially against Sir Cooper Key's view, the Board naturally played a secondary part, confining itself to assisting in every possible way the progress of the army by the route it had chosen.

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[1] Sir William Hewett wrote as follows to Sir Cooper Key from Massowah, under date 6th April 1884, when all was well over: "I am so glad you think the navy work was well done. One thing, my dear admiral—you looked after our wants so well at home that it made our work easy here. I never saw a force so well supplied as Graham's troops were. They had more than they could eat, and the navy did its best to keep up the water-supply."

Sir Cooper Key was again in constant discussion with the military authorities, and gave his views with his usual precision, frankness, and clearness. There were, he thought, but two alternative routes — the water transport from Wady Halfa to Khartoum by Berber; and a railway from Suakim to Berber, with a march thence by the Nile to Khartoum, using the Nile itself, as far as might be, to assist transport.

The survey of the Nile, which had been made by the Admiralty officers, had discounted the value of that route. Steamers might no doubt be tracked through the cataracts, but there was much difference between such an operation and the transport of an army. Most likely, the steamers and boats would have to be unloaded below each cataract; the men, stores, and ammunition would have to be carried by land some miles, and re-embarked after the cataract was passed. The time of the rising of the Nile, and the height of the rise, were both uncertain; but it would be necessary to pass each cataract at the highest Nile, which only lasted a few weeks. The highest Nile at the second cataract was some weeks later than that at Abu Hamed, and this would greatly increase the difficulty in passing them.

The Nile route, he conceived, could not be relied on. Success over it depended on too many contingencies.

On the other hand, the construction of a railway from Suakim to Berber had been considered, and it appeared feasible to complete it by the 1st of November. Then the troops could be assembled at Suakim and proceed rapidly to Berber. But again, delay in constructing the railway might risk the success of the expedition.

After the railway was completed, difficulties would arise as to its disposal, and reasons would in consequence be alleged for the occupation of Berber and other parts of the Soudan.

Sir Cooper thought there was a middle course. The railway should be at once laid from Suakim to the hills, where a good position should be selected and entrenched, camels procured, etc., and, when all was ready, the expedition should proceed on camels to Berber, and onwards to Khartoum by the Nile bank. If there were a difficulty about camels, it would be better to push on the railway to Berber as fast as possible.

At this time there was a small expedition under Major Kitchener crossing the Korosko Desert from the Nile to Berber. When accounts were received of its result, it might be practicable, and would certainly be desirable, to send a small body of carefully selected troops by that route, to make a simultaneous advance on Berber with the expedition from Suakim. There were sufficient steamers and boats below Korosko, so it would not be necessary to construct any, and no difficulty presented itself as to water transport, so far. The advance of the two expeditions would have a tranquillising effect, and would check the Mahdi's advance northwards.

These views, the wisdom of which are by many believed to have been sadly confirmed by subsequent events, exhibit Sir Cooper's clearness and precision of thought in a matter which, but for the changes in modern warfare, would have been far outside the range of a sailor's purview. But whether Sir Cooper Key was right or wrong in the advice he tendered, it was not accepted, and his functions as an executive were not exercised in the operations which so unhappily failed at the last moment, as they had been in the affairs of Egypt previously.

Of course, when the Nile route was finally decided on, the only question before the Admiralty was to help the army in every possible way. Sir Cooper Key wrote a memorandum, at the end of July, stating what the navy would undertake to do, and how far it would be responsible in carrying out a plan it did not favour, which was at once accepted by Lord Wolseley as being "all that could be desired."

He thought it would be too late in the year to collect labourers and necessary appliances to enable steamers to be passed up the second cataract, but that no difficulty would be found in transporting troops to its foot at any season. Above the second cataract, transport must be effected by land or in small boats. He proposed that the navy should be responsible for transport up to the foot of the second cataract, but that after that, while the navy would provide all it could that might be required by the military authorities, the naval *responsibility* should cease. Mr. Cook would contract to carry 4000 troops from Assiout to Wady Halfa in one trip. There were two stern-wheel steamers building by Messrs. Yarrow that would be available, and might be sent up in sections to any point where it was desired to launch them, with workmen to put them together; this could be done in about three weeks, and they could be worked by native crews.

There was yet one more case in which Sir Cooper Key, acting as a member of the Board, was to exhibit his executive capacity before he went out of office.

The news of the advance of Russia to Merv reached this country in February 1884; it raised a considerable amount of excitement and alarm, and no doubt contributed to awaken us to the consciousness of our naval position. Though Russian diplomacy was, through its recognised channels, pacific, the Russian press was allowed to be decidedly hostile to us, and it was at anyrate seen that some treaty of delimitation, some paper barrier to Russia's otherwise undefined advance, was necessary. An immediate Commission of Delimitation was proposed by us and accepted by Russia, and Sir Peter Lumsden, on our part, was appointed to meet General Zelenoi, on the Russian part, on the Afghan frontier, and proceed to define a boundary.

The feeling of disquiet which now possessed the public was not allayed when we learned that Zelenoi was postponing the meeting on the plea of ill-health. The English Commission waited for months in idleness, but Zelenoi did not join it. In December the notorious General Skobelef wrote plainly, that it was a "political necessity" for Russia to possess herself of India.

At the opening of the year 1885 Russia was wholly given over to considering the two war-threatening questions of Afghanistan and Bulgaria. Negotiations went on between London and St. Petersburg with formal civility; but the delimitation did not progress, and the Russians continued to press on towards the doubtful territories. The settlement of the boundary was transferred to London, so that, on the 29th of January, a Russian engineer was despatched thither from St. Petersburg to urge—it was understood—the Russian claim to Penjdeh.

But there was no cessation of the Russian advance. Her troops occupied Sari Yazi and the Zulficar Pass, and declined to withdraw when requested. The situation became extremely menacing. On the 15th of March the Foreign Minister, Lord Granville, declared publicly his objections to the Russian claims, but, as if Russia was determined to force a war on us at all hazards, her army, on 30th March, attacked the Afghans on the river Kuslik, and after a struggle occupied Penjdeh.

The movement had been anticipated by increased feeling in England. On the 26th of March the reserves were called out by proclamation. The Admiralty, through the Foreign Office, had obtained the cession of the island of Port Hamilton, south of the Korea, as an advanced depôt on the line to the Russian war port of Vladivostock; on the 2nd of April the British flag was hoisted there, and it was subsequently connected with the mainland and Hong Kong by a telegraph cable.

This was a bold stroke, particularly advocated by Sir Cooper Key, and much criticised then and afterwards, when it was determined to abandon the possession. It may be granted that the island was more theoretically than practically an ideal spot for a naval base, and that there would be little or no value in it in peace time. But at least some who had visited it saw great value in the position, and if war with Russia had ensued, it may scarcely be doubted that the wisdom of the Admiralty step would have been fully confirmed, inasmuch as every ship despatched from Hong Kong to the north would have almost inevitably been ordered to call there for telegraphic and final orders, and coals and other stores would have, automatically almost, found their way to the port at which our warships would, for other reasons, have been bound to call.

From the very first the Admiralty had taken that preliminary step which works so silently, is heard of so little, and yet is such an absolute preventive of any disaster to ourselves at the opening of a war.

Every Russian warship all over the world, absent from her own ports, was shadowed by a sufficient British force. It was in the general case good-humouredly borne by the Russian officers, as the camaraderie cultivated in the sea-republic enables the naval officers of all nationalities, even when political relations are most strained, to recognise, and admit to one another, that each is a passive instrument or agent in the hands of its Government at home, and that no personal animosities need intrude themselves. So generally, and especially in the China Seas, where the Russian warships were most numerous, Russian officers put a good face on what could not but have been humiliating to them, and they managed commonly to join with the English in looking at the humorous side of things. To shake off the watcher on the one side, and not to be shaken off on the other, by any changing of port or misleading intelligence, was often made a sort of friendly game, and if a Russian was beaten at it he lost with a good grace.

But it was, obviously, delicate ground. It was a necessity for us, in a case of such strained relations, to do it; but when the telegraph might at any instant convert the watched and watching into deadly enemies, and when the less controlled feeling of the younger officers and the ships' companies are taken into account, the wonder, and the credit of those concerned, is, that our imperial duties were carried out without bloodshed. It was sometimes very near it.

Captain Long[1] had been despatched with his own ship, the *Agamemnon*, and another, to do this shadowing towards the Russian Admiral Crown, and his flagship the *Vladimir Monomach*. He was understood to be at Yokoska, in the Gulf of Yedo, Japan. Captain Long was necessarily debarred from news while at sea, and on entering the gulf before daylight, on the 6th of May 1885, he was in some doubt of what his meeting with the Russian admiral might come to, supposing war had been declared in the interval; as, though our officers had been instructed to respect the neutrality of the Japanese waters, it did not follow that such a precaution had been taken by the Russian Government.

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[1] Died a rear-admiral; killed by a fall from his horse.

With that caution to which I have adverted, Captain Long separated his ships to mark his duty of shadowing as little as might be to the Russian view, and steamed slowly up alone. Just as day was breaking he saw the Russian admiral anchored in such a situation as made it necessary for the *Agamemnon* to pass her closely. As light came and the *Agamemnon* neared her, Captain Long saw that the Russians were not only at their quarters, but were keeping their guns trained upon the English ship—the heavy guns depressed for her water-line, but the light guns ready to sweep the bridge and upper-deck. Captain Long felt it quite possible that war had been declared, and that in a moment he might have to sustain the Russian broadside, but yet the slightest move on his side in response to the Russian threat might have drawn their fire, peace or war notwithstanding. He was consoled by thinking that, if the broadside did come, he could respond to it with his ram and instantly send the *Vladimir* to the bottom. But as there was no response from the English ship, the Russian, whose action had been prompted by a simple desire to be prepared, while in doubt whether the *Agamemnon* came in peace or in war, secured her guns again, while the latter quietly anchored.

But the danger was great and immediate, for, as the Russian admiral afterwards told Captain Long, his men were so excited that he dreaded that he might at any moment lose control over them. Captain Long, still with that care for susceptibilities which so much characterises the modern naval officer, considered that, on the whole, his watch could be as well maintained at some little distance, and he shifted his quarters to Yokohama.

The excitement in England reached its height on 9th of April, when there was a panic on the Stock Exchange. Russian stocks fell 10 points, Egyptian 6, and our own Consols 2 points. A great meeting to consider the state of the navy was held at the Cannon Street Hotel on the 13th, and a resolution urging Government to take immediate steps in regard to it was moved by Mr. Henry Hucks Gibbs,[1] and seconded by the Right Hon. W. H. Smith, First Lord of the Admiralty under the former Government. On the 21st of April Mr. Gladstone moved for a credit of £11,000,000,—£4,500,000 for the Soudan, and £6,500,000 for naval and military preparations.

Sir Cooper Key's views of the naval situation were as clear and decided as usual. The Baltic was assumed as our chief field of action, but the force to be sent should from the first be sufficient to effect the blockade of the Russian Fleet there, and to make it likely that the chief danger to our ships there would be from torpedo-boat attack. Admiral Sir Geoffrey Hornby, then Commander-in-Chief at Portsmouth, was selected for the command, and it was intended to send with him, as the first instalment, 10 ironclads and the *Polyphemus*, the *Hecla* torpedo-vessel, 6 cruisers, 13 gunboats, 8 hired armed vessels and 2 armed fast tugs, 16 torpedo-boats, of which the *Hecla* would carry the second-class boats, 8 in number.

The object, however, was to be more ready than we seemed to be. "We have not commissioned," wrote Sir Cooper to Sir Geoffrey Hornby on the 7th of May, "and, if peaceable counsels prevail, shall not commission, all the ships intended for the first instalment of the Baltic Fleet, especially the small vessels which would be necessary for carrying out the exercises you propose. Even if we had only to guard against Russia, we should have at least thirty or forty small vessels round the coast in addition to the ironclads, and vessels of the *Cyclops* class, to protect the commercial harbours when sub-marine mines would be laid down; so that, even if a squadron of ironclads were to arrive off a port, there would be ample time for our fleet to follow them before they could do much harm. We must also bear in mind that our fleet at home would, and always should be, much superior to any attacking fleet. We ought always to be in such a position that an enemy's fleet would not like to risk an encounter with ours. They might endeavour to, and might succeed in, evading them for a time—but would scarcely risk landing a force (except perhaps in Ireland), unless they could ensure throwing in reinforcements and supplies. I am quite aware that our very existence as a nation depends on this being the case, and no efforts should be spared to ensure it."

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[1] Created Baron Aldenham, 1896.

But when we were thus ready, with Russian ships all over the world that were absent from their own ports shadowed; with a sufficient fleet ready to sail for the Baltic at a few days' notice; and with the inner line of naval defence near our own shores, which was the element of ultimate security arrived at by Lord St. Vincent, the sky began to clear. On the 2nd of May so conciliatory a reply arrived from St. Petersburg that the prospects of war became remote, and the Stock Exchange recovered itself.

Then it was a question what to do with the large fleet already assembled or ready to assemble. Sir Cooper had his eye on turning things to account by getting exercises with ships and torpedo-boats, but he "objected as a rule to sham fights—they were apt to lead people astray. But he was much in favour of exercising officers and men more constantly in handling both ships and torpedo-boats, though it was not always easy to carry them out without interference with other calls for the ships." However, in the end a plan of general exercise was decided on.

It requires some explanation before we can understand how it was that the exercises took the form they did. That difficulty, absence of uniformity of type, which had held the hands of Lord Northbrook's Board, and subjected it to so much opprobrium, at once attracted attention as soon as the fleet was assembled. It was characterised as "a menagerie of unruly and curiously assorted ships." But there it was. A modern fleet of twelve "battleships," as we now call them, some ten cruisers and gunboats; the *Polyphemus*, a novel type of which no one could say whether it was sporadic or the first outbreak of an epidemic; six first-class torpedo-boats; and the *Oregon*, a splendid specimen of the subsidised mercantile marine "liner." In the result the experiments were chiefly defensive, and chiefly so against torpedo-boat attack. It is true, no doubt, that much was learned regarding torpedo-boat attack, and the best means of breaking down an enemy's defences against such an attack; but, on the other hand, the sense of it was, and was taken to be, a lesson as to how our ships could best protect themselves from the enemy's torpedo-boats. The explanation appears to be the conviction to which Sir Cooper Key, and no doubt many others, had come, that the rôle of our ships, had they gone to the Baltic as belligerents, would have been chiefly defensive. We must couple Sir Cooper Key's thought, as the thought of the day, with another measure which had his approval. Vice-Admiral Hamilton[1] was one of a joint Naval and Military Commission which was visiting the mercantile marine ports with a view to induce the municipal authorities to contribute to their local defence. The fact was, that at that time, no less by Sir Cooper Key than by other authorities, the defensive power of the modern navy was distrusted. Theoretically, as we have seen, Sir Cooper Key was ready to acknowledge its defensive power. Practically, that feeling was weak.

But now Sir Cooper Key's influence over the fortunes of the navy was drawing to a close. In any case, he was but a few months off the age of sixty-five, when the rule of compulsory retirement would dismiss him from further service. But the end of his active career was nearer than that. On the 9th of June Mr. Gladstone was beaten on the Budget resolutions, and his Government fell. "I am off," wrote Sir Cooper on the 24th of June, "to vegetate on half-pay. Now the time has come, I regret my severance from the service in which and for which I have passed my life. I feel, however, that changes at headquarters please the service, and are therefore desirable."

Perhaps no better summary of the impression Sir Cooper Key created at the Admiralty can be conveyed than by the following extract from a letter written by his chief, Lord Northbrook, in October 1882, to Sir Beauchamp Seymour, and which his Lordship has kindly permitted me to use:—

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[1] Now Admiral Sir R. Vesey Hamilton, G.C.B.

" Key will, I trust, remain as Senior Naval Lord as long as he can, for I don't think we ever had so good a one before. He has all the ability which Frederick Grey had, with the additional merit of being the most ready man I ever came across to listen to the arguments of men who do not agree with him, and consider them, and modify his own opinions when necessary,—added to this, he has a first-rate political head."

CHAPTER XIX

LAST DAYS—1885–1888

THERE were many by-products of Sir Cooper Key's active mind while he was at the Admiralty. One of them was the study of the real position of the torpedo as an addition to the armament of ironclads. He raised the question of how far the manœuvring powers of a ship would go in avoiding the torpedo fired by another ship in an ordinary action. I recollect his writing to me for details of the manœuvring powers of various ships, and for diagrams of their possible application to the avoidance of an approaching torpedo.[1] He employed others in the same way, and the general conclusion seemed to be that in certain cases of torpedoes fired from above water, so that they could be seen, a ship turning towards the torpedo might often avoid a blow otherwise certain.

Sir Cooper Key was a strong opponent of the Channel Tunnel. Early in 1882 he was full of objections to it, and could not understand how any sailor could feel indifferent about it. He thought that if the tunnel were to be constructed, and a French invasion were to be contemplated, it would take place through the tunnel. Vast expenditure on our side would be necessary, as nothing short of the military occupation of a large area round Dover by well-armed fortification ought to satisfy the people of this country.[2] He thought we should find it necessary to put on foot a standing army equal to that of a continental Power. He did not believe in any arrangements for immediately blocking or flooding the tunnel. He thought we need not doubt the friendliness of the French, but that history taught us to be distrustful when the interests or passions of a people were concerned. He thought our shipping interest would be impaired by the traffic through the tunnel. What would be the use of the command of the Channel to us, when the enemy could pass under it?

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[1] I was then captain of the Steam Reserve at Portsmouth, and was in the habit of making the most accurate experiments possible to ascertain the limits to the manœuvring powers of the ships that passed through my hands.

[2] I remember having a long and interesting argument with him in his room at the Admiralty on the point. I thought that, so far as I understood military

An undoubtedly strong point with him was that, according to our present belief, even a successful invasion, owing to the absence of our fleet, would collapse when the navy cut the landed force off from its base. It could not be so cut off if the enemy got possession of the tunnel. He thought that if the tunnel were made, and were commercially successful, another would follow, and the difficulties would be doubled.

There is no doubt that these views have prevailed, and it may be supposed will permanently prevail unless some great change takes place to prevent the undertaking of that great engineering enterprise.

Very different were his views regarding another great engineering achievement for facilitating international communication. The question of the Suez Canal in relation to traffic was before him in 1883, and he was all for widening and deepening it to three times the then width and to thirty feet depth.

By this means the passage through the canal would be facilitated—(*a*) by ships being able to pass both ways without impediment; (*b*) by their being able to proceed at greater speed and with better steerage; (*c*) by their being able to proceed on fine nights.

history, it would be difficult to find a French general who would deploy a force out of the tunnel, and try to fight a battle with no line of retreat but a mere rat-hole in his rear. I held that fortification of any kind was a mistake,—that a clear glacis surrounding the mouth of the tunnel would make the enterprise of invasion hopeless in the eyes of French generals. But I made no way at all in urging my point of view. I also thought that the French would keep any promise made in regard to attack *viâ* the tunnel. Sir Cooper did not think they would.

He thought it would not be possible to block such a canal by accident or design; a matter of vital importance to us in case of our requiring to reinforce navy or army in India. Nothing would be so certain to keep communication open as widening and deepening the canal. France and Turkey had more ironclads which could pass the existing canal than we had, and we must either build ships to match the canal, or fit the canal to match our ships. He thought also that efforts should be made to introduce English pilots.

The ever-green question of the age and method of entry of naval cadets bloomed once more in 1881 under the treatment of Mr. Shaw-Lefevre. Sir Cooper thereon wrote a memorandum strongly advocating retention of the early age and the limited competition. He quoted the head-master of Eton as being not altogether favourable to competition, but considered that on the whole the opinions were in its favour. He thought the existing system, in its practical working, entered the boys under limited competition at the age of thirteen, and then gave them two years in the *Britannia*. Other proposals were, to have limited competition at the age of fifteen, and one year in the *Britannia*; or to have open competition at sixteen, and one year in the *Britannia*.

Sir Cooper claimed to be an advocate for reform in any system that was found defective; that he approved of a standard of education for every path of life. But he felt that defects must be proved, and that "education" must mean training of mind and intellect for the path chosen.

He did not think the results of our system showed defects which proposed changes would remedy. He held that our young officers, as a body, compare favourably with those of the line and of the marines, and that our more highly-instructed lieutenants showed well beside the officers of the engineers and artillery. There was no doubt about the energy and intelligence of our young lieutenants and sub-lieutenants. Where they failed was in want of practical experience in handling ships in bad weather, and in other details of a seaman's duty. Such knowledge was only to be gained on board ship. It could not be gained by two years in a public school. The young officers would be thus unfitted to obey or to command, and would be more like young subalterns in the army, inclined to delegate their authority to non-commissioned officers, as having more practical experience.

He failed to see that the existing system did not produce and nourish the qualities most required in a naval officer; but he saw very distinctly that raising the age of entry would put obstacles in the way of those qualities being attained.

Lads from public schools would not take kindly to the rough and uncomfortable life that they must lead at sea at first. It would be very difficult to instil into them that implicit and ready obedience, habits of subordination, and knowledge of the character of seamen, which are necessary to fit a man for command.

If it were said that officers were deficient in "education," then he held the answer to be that an officer's true education was carried on at every stage of his career; and as the object was to fit him for the path of life he had chosen, his retention at school on shore would not effect that object, but would unfit him for his future duties.

He thought nine-tenths of the work of the service was done, and must be done, by practical men with very little book-learning, who are thoroughly at home at sea in all circumstances, have the full confidence of the seamen, as they have been at sea from their boyhood, and know the seamen's duty as well as their own. The remaining tenth must be this and more. They must have a thorough theoretical and practical knowledge of some sciences, and a partial knowledge of many. Such men will, if given the opportunity, work for the higher knowledge, not only for its own sake, but as a means of advancement.

The college at Greenwich was established with this object, and was succeeding. Only a small portion of the officers passing through it would carry away much, but all would carry away something, and perhaps a tenth will lay the foundation on which they can afterwards build.

It might be thought that we were aiming at a low standard when only 100 out of 1000 were expected to be highly qualified. But we should be satisfied with that.

If other countries were referred to who kept their midshipmen at school till they were seventeen or eighteen, the answer was that Greenwich College was unrivalled by any in Europe, and we were only now beginning to realise its benefits. When it was recommended that cadets should only remain one year in the *Britannia*, it could be replied that this was tried for some years when the *Illustrious* was first organised, and was found insufficient.

Not impossibly these views of Sir Cooper's may be still held by the great body of naval officers who have given consideration to the subject. It is constantly noticed when British and foreign warships are in company, that the officers in the British ships are far more enterprising in all that relates to the navigation and pilotage of their ships than are the foreigners. They will proceed in fog, they will enter ports at night without a pilot, when foreign officers will not do it without a pilot even in the day-time. Officers sometimes attribute this to early training. But as I write, the pendulum is swinging heavily the other way, and the reasonings used by Sir Cooper Key have not been held strong enough to maintain the age-entry at the point he desired.

Allusion has been made in Chapter XVII. to the widespread belief of the service that Sir Cooper Key did not make that full use of his position and antecedents to establish a predominant navy while he was at the Admiralty. I have given in that chapter some reasons of a very practical character to show that it was almost impossible to have done in 1884 what was afterwards done in 1889. But if it is asked, why, in spite of these difficulties, so advanced a thinker as Sir Cooper Key did not lead, or attempt to lead, the navy to claim supremacy at sea as the goal towards which it ought to struggle with all its force, a clear answer can be given.

Sir Cooper Key never realised that, in this Empire, in war there was nothing between sea-supremacy and ruin. He had not read naval history much, and not at all as containing within it the rules of naval warfare which must be followed in the future, if the Empire was to be preserved. No naval histories had been written from that point of view; and the idea of judging of the present and future in naval affairs by reference to their past, which is now so common, had scarcely shown itself.

No one, perhaps, had ever as much as thought of examining the conditions of 1779 to 1783, when our fleets were liable to be overmatched in every part of the world, and of their application to the present day. No one certainly had perceived that while such conditions were dangerous then, their recurrence would be fatal now.

We have seen how, just before his appointment to the Royal Commission of 1859, and as a Royal Commissioner, he viewed with comparative complacency the arrival of a time when the enemy's fleets might wholly command the Channel, thinking that the perils of such a condition would be met by sufficient fortification of the naval ports. We have also seen how in the *Excellent* he held that the appearance of the enemy's fleets in our home waters with hostile intent would be a normal circumstance in war, to be met by local defences such as the *Staunch*-class gunboats offered. To the day of his death he had not parted with conceptions based on the idea that the sea would become in war a free territory for each side to operate in with very little hindrance from the other. He has not left behind him a line to show that he understood how naval power in defence must operate to be successful, by its effective observation of all the enemy's forces that could attack. And though, as we have seen, he, as a member of the Board of Admiralty, put that form of defence into operation as a matter of course, when relations with Russia became strained, he never admitted it as a leading principle of naval war.

The state of his mind is shown by two papers on the defence of our outlying territories that he has left behind him, the last of which was published in the *Nineteenth Century* for August 1886. The first, dated September 1884, was penned while he was still at the Admiralty.

In the first paper he addressed himself to the question of defending those ports or stations abroad—naval depôts—which were in peace of use and importance to the navy, and might presumably be of still greater use and importance to it in war.

The form of attack he anticipated as likely to be developed by an enemy against these "naval stations" was an attack by "a squadron," and he makes no allusion to the historical fact that an attack on such places by "squadrons" was rare and exceptional; while the attack by landed troops was an almost unbroken rule.

He urged that all naval stations should be put in such a state that they could "defend themselves against the attacks of an enemy's squadron without relying on the presence of our ships for that purpose." He did not in any way consider the result of a long experience, showing the hopelessness of believing any garrison of a naval station capable of doing such a thing, and therefore of the impracticability of the task he would place upon the army. Nor did he take any note of the powerlessness of a garrison to defend the port against a blockade; and the consequent duty—a duty always attended to in our wars—of localising a naval force having that object in view. He did not, in this paper, give any hint of meaning that the places should be able to locally defend themselves *for a time* pending the arrival of naval assistance.

He held remarkably strong opinions as to the primary importance of these naval stations to the fleets maintained in different waters, going so far as to say that our squadrons must draw their supplies from them, and effect all their repairs and refits at them; and that the destruction of an important naval depôt would mean the dispersion of the squadron on that station. Here, again, he made no reference to even our latest experience, where our fleets, both in the Black Sea and the Baltic, drew their supplies from home, and must have come home for most of the repairs and refits, which could not be carried out in the anchorages which the squadrons had seized in the enemy's waters. He did not remark upon the special character of depôts along the line of a trade-route which sustained not only the commerce passing over it, but any warships protecting such a route by convoy, by patrol, or by simply resting in or near the port, for the purpose of preventing it from being blockaded. He did not allude to the obvious point that the navy could not possibly protect the trade over any route unless it also—by the fact that it protected the route—protected the ports of call along it. He assumed, therefore, that depôts which were of convenience and importance to a particular class of our ships engaged upon a special duty, would, even in a higher degree, be of convenience and importance to our capital fleets, which would have nothing to do with the trade-routes while they were observing the enemy's naval forces in the enemy's waters.

He seemed to think that, unless our capital fleets were localised at the places most requiring their defensive help, they could not defend; and he did not appear to note that the whole course of our war experience showed that the only way to make naval defence effective was to put our fleets in the closest touch with those forces of the enemy which would have in some way to avoid their observation before they could proceed to attack. On the contrary, he thought our fleets would be employed in protecting our commerce and merchant shipping, attacking the enemy's ports, and destroying his merchant shipping; and for this reason he thought that none of our naval force could be relied on to protect the depôts, on which, in his view, its very existence depended.

In his subsequent paper, published in the *Nineteenth Century*, he drew a curious distinction between (1) places like Malta, Aden, Simon's Town, Gibraltar, Bermuda, and Hong Kong, which were places for the repair and equipment of ships of war; and (2) places usually called "coaling stations," like King George's Sound, Port Royal, St. Lucia, and Perim, which were places of value for the replenishment of our ships of war and merchant vessels with coal, stores, and provisions, and which might also serve as refuges when ships were pressed, either by the enemy or by bad weather.

He thus drew some distinction between the uses of different sorts of naval depôts, though not that which can be based on historical antecedents. But on the distinction he drew he came to a still more curious conclusion as to their defence. With the first class of stations, he followed historical teaching, saying that these depôts "should be made capable of protecting themselves against any force that might reasonably be expected to be brought against them, and be prepared to stand a siege *until the arrival of our fleet to their support*." This plan of defence is not only conformable to reason, but is proved by history and experience to be the only effective plan.

But the second class of places were still, as in his first paper, to be left absolutely alone to defend themselves. They were to be "defended as independent of the presence of our fleet, which must always be left free for offensive operations, and for the protection of our trade on the high seas. The permanent self-defence of these ports should be sufficient to deny the anchorage to an enemy, and to prevent the occupation or destruction of the depôt by a hostile squadron." He considered that the best form of defence would be sub-marine mines, supported by guns mounted on shore.

The correctness or otherwise of these views may properly be subject for argument. What has to be explained in Sir Cooper Key's case is that views running very counter to history and experience were not seen to need explanation.

Nothing is made clearer by history than the action of the enemy in attack, and of the navy in defence. The enemy never attacked by squadrons; he always attacked by landing troops, not where batteries were placed, but as far as could be where there were none; and the supporting ships kept pretty clear of even the lightest batteries, and never attempted to enter harbours. The navy defending, always, if it was strong enough, defended by watching as closely as it could the enemy's fleet. If it was not strong enough for this, it sought a rendezvous; and whenever it received intelligence of an attack, it embarked troops and flew to the rescue. Only in rare and particular cases did any other duty intervene to prevent the support of garrisons becoming the first of all the naval duties.

The remarkable experience of St. Lucia—one of the places mentioned by Sir Cooper in the article—would of itself have been sufficient, had it been in his mind, to suggest some attempt at reconciliation between experience and forecast. In 1778 it was powerfully fortified and well garrisoned by the French; but, in the supposed absence of the superior French Fleet, some 5000 men were landed by the British Fleet under Barrington for its capture. After the landing, the superior French Fleet arrived, and only Barrington's promptitude and skill in securing a defensible anchorage prevented the French from capturing the transports and cutting off the landed men from their stores and supplies. The French landed all the men they could to assist the garrison, but the British invading force was too strong, and the place fell. In 1780 the French determined to recover the island, but the presence of the British Fleet, though it was very inferior, compelled them to abandon their design. In 1781 the French landed forces for its reconquest; but the landing of seamen and marines from a squadron that happened to arrive at the moment, together with news that the inferior British Fleet was pushing with all speed to the rescue, compelled the French to re-embark their troops. Apart from the defending fleets, therefore, there could have been no hopes of defending St. Lucia; and unless the defending fleet was able to overcome the attacking fleet, or at least to land a force great enough to make the garrison superior to the invading force, the place could not be saved after the men were landed. The only defence shown to be real by history was the prevention of attack, and this no works or garrisons have shown themselves capable of doing, unless they were superior to the attacking force. When Sir Cooper Key wrote, no one had drawn out these historic parallels for the service of naval statesmen. There was no basis to go upon in considering attack and defence. They were thrown back on pure speculation; and it was impossible for a man who had hardly ever been free from the pressure of considering the mediate, if not the immediate, to carry the speculation beyond what seemed on the surface most plain and likely. Even to-day the great body of men who are concerned in these matters do not think they do at all an unreasonable thing when they declare to the army that it is expected to defend the post it occupies. The unreasonableness appears to them, as it did to Sir Cooper Key, on the other side.

But the examination of his views compels us to believe that he considered the question of the size of our fleet, in proportion to that of probable opponents, as one of degree only. If we had a larger fleet, we should do better; if we had a smaller fleet, we should do worse: that was all. He had no clear idea that the difference between a supreme navy and one which was not supreme was a difference in kind.

And yet, when it came to the practical issue, he, in agreement with the Board, caused every Russian ship out of Russian waters to be watched by a superior British force when there was a prospect of war, well knowing that there was no complete defence except this.

As a worker at the Admiralty, Sir Cooper Key was insatiable. He was in his room early and late, and he generally took home to his official residence—23 New Street, Spring Gardens, just at the back of the Admiralty, and now pulled down—masses of papers for consideration in the evening. It grew, indeed, to be a difficulty with him, for he could not bear to be without a full supply of "current business" to occupy his mind. He absorbed an immense proportion of Admiralty work into his own hands; but it was the more natural for him to do so, as there was no class of Admiralty work with which his career had not given him the familiarity of an expert. All questions of personnel and discipline were the everyday experience of the naval commander; naval architecture and marine engineering fell in with his experience in the Steam Reserve at Devonport; everything relating to offence and defence was merely a return to his work as captain of the *Excellent* and Director of Naval Ordnance; as superintendent of two dockyards, his knowledge of our manufacturing establishments was complete; the first head of Greenwich Naval College was necessarily abreast of all that related to naval education. Possibly, no one who had before occupied, or who has since occupied, the post of First Sea Lord of the Admiralty, had such a wide knowledge of every naval department. But it is a question whether any man with Sir Cooper Key's antecedents could avoid being somewhat hampered by them, if it were at any time demanded of him to withdraw his mind to the consideration of great principles apart from their surrounding details.

Although of a lithe and agile frame, and normally devoted to athletics, and yet not a horseman, Sir Cooper was hard put to it for sustaining exercise in support of the incessant brain-work of his office. In the summer he found it after office-hours in the little green behind the Admiralty, where a vigorous bout of lawn tennis set him up for the next day's work. In the dark hours of winter, smoking a great cigar, he rushed through a round of the streets in the vicinity of Whitehall, exploring odd and out-of-the-way passages; and, if he had a naval friend with him, talking hard on the latest naval developments.

Surely, never were the ostensible grounds for enforcing retirement upon active flag officers at the fixed age of sixty-five more absurdly belied than, as far as could be seen, they were in the case of Admiral Sir Cooper Key. Quitting the Admiralty after more than six years' service there, from the legitimate cause of a change of Government, he was within seven months of compulsory retirement from the public service altogether.

But the release from work and anxiety, and latterly from the disappointment and worry which his loss of naval popularity had entailed upon him, was to his temperament as the coming of an Indian summer. All things seemed to become new to him, and he took up a new life with new interests, as if there had never been an old one with old interests. The mere physical change in him was delightful in the eyes of his friends. His ever-active body grew more active, and his mind blossomed anew in the new soil.

The dormant sportsman's instincts broke out in him in a way surprising to notice. He shot and he fished as he had never done either before, and the killing of his first salmon after his retirement was described to me with a glow of enthusiasm which it is charming to recall. He always drove well, and was proud of his driving; and one of the last of the memories I have of him, which is glad and pathetic at the same time, is sitting beside him on the box of a mail phaeton or waggonette, while, with an immense cigar in his mouth, his face beaming all over, and with a fine pair of horses in hand, he exhibited his perfect control over them by making what appeared to me as a series of the closest of shaves.

Retirement schemes which suddenly break the continuity of an active life drive the technically, but not really, worn-out soldiers and sailors much into the city, not always to their own advantage. Sir Cooper Key was the last to be an exception, and he became chairman of the new Nordenfelt Company, which, entering life on a rolling wave of prosperity, had its time of adversity as the Maxim-Nordenfelt Company, and has since fully recovered itself under the chairmanship of another distinguished sailor. Sir Cooper Key was spared the days of anxiety which were in store for the managers of this concern, but a long education in a service peculiarly open and outspoken is hardly good training for a naturally sincere and trustful character when making way for the first time in business circles. A man of this sort, trained in this way, is apt to be over-sanguine in estimating the prospects of new enterprises. *Caveat emptor* is not always in his mind, as it necessarily must be in the minds of men trained in business habits. Sir Cooper Key showed a readiness to enter upon new undertakings with all the promptitude and spirit which had distinguished his naval career; and it is quite possible that such a temper would, had he lived, have brought him anxieties not so easy to shake off.

He did not absolutely escape from the calls of official life. Very soon after leaving the Admiralty he was appointed a member of the Royal Commission for inquiry into the causes of loss of life at sea, which reported later. But he did not, after quitting public life, take much practical interest in naval progress, or attempt to control it or advance it, as many men in his position have done, by publishing letters or articles. The article already quoted from the

Nineteenth Century is the only serious contribution that he made to naval literature. He was, however, drawn from his somewhat reticent position by published reflections upon the Admiralty, which Lord Charles Beresford gave vent to in justification of his resignation of the seat he held at Lord George Hamilton's Board in 1887–1888.

Lord Charles had written to the *Times* on the 30th of January 1888, declaring that in 1885 there was at the Admiralty "no shred of system or plan for organisation for war." He had said the same thing in other words in a speech to his constituents in August 1886. Sir Cooper Key wrote a letter to the *Times*, which was published on the 3rd of February, declaring that he felt "some protest should be at once made, with the endeavour to relieve the public mind from hastily concluding that the effective administration of the navy is dependent on one man, however capable he may be."

"He would not say," he continued, "that our organisation was, or is, perfect, but it is clear that the actual, indeed the sole duty of our naval administration is to organise our fleets for war. Every order given, every pound expended by the Board of Admiralty, is with the object of preparing for war. It is difficult, therefore, to understand that our naval successes and acknowledged efficiency of our squadrons in all parts of the world have resulted from 'no shred of system.' He fully admitted that great assistance has probably been given to the Board, and especially to the First Lord, who is responsible for carrying out the naval policy determined on by the Cabinet, and to the Senior Naval Lord, who is charged with all duties connected with the movements of Her Majesty's ships, by the recent extension of the Intelligence Department, which was first established under Lord Northbrook's administration, and which did good service under the name of the Intelligence Committee. The same intelligent and zealous officer, Captain W. H. Hall, who was then the chief worker on that committee, remains as chief of the department.

"The committee was then presided over by the Senior Naval Lord, and its proceedings were strictly confidential.

"The amount of valuable information collected by that committee previous to July 1885 was of the greatest service to the Board when war was imminent in the early part of that year. I have," he wrote, "no intention of making public the details of the preparations then made. They were such, however, as would make us independent of the cutting of the telegraph cables, except as to the announcement to admirals on foreign stations that war is declared.

"There is no point mentioned by Lord Charles Beresford as being now prepared by the Intelligence Department which was not prepared at that time by the Intelligence Committee, or by other departments under the order or superintendence of members of the Board, even to chartering and preparing for armament many of the fastest merchant steamers in various parts of the world. One of them, the *Oregon*, was actually armed and commissioned. The Board could not transfer the responsibility of preparing a 'plan of campaign' to the Intelligence Committee; but that committee was of great assistance in giving information as to its detail. 'Plans of campaign' cannot be accurately prepared before a war is imminent; much must depend on the cause of war and existing circumstances. Admirals on foreign stations do not look to the Admiralty to inform them what foreign ships of war are within the limits of their stations. It is their duty to inform the Admiralty on such matters, as they are the highest authority on the subject, although all information obtained at home or on other stations has been at once conveyed to the proper quarter."

After referring to the office of Director of Transports, Sir Cooper Key continued:—

"I am far from being satisfied with the condition of the navy, either as regards *matériel*, *personnel*, or organisation; but I believe it to be superior in all to any other navy, and that it is improving year by year. If the estimates were maintained for a few years at the same amount as they were when Lord Northbrook left office, it will depend on the Board of Admiralty to ensure efficiency on all points, which cannot exist without economical expenditure in every branch to prevent waste of the money voted.

"In my opinion, Lord Charles Beresford takes an exaggerated view of the importance of the Intelligence Department. I fully agree with him that it was wise to extend its operations; but they should be limited to obtaining and collating information, leaving it to the responsible Ministers of the Crown—the Board of Admiralty—to use that information as our naval policy may require. I also concur in his view that disaster must result if the unanimous opinion of the naval members of the Board is overruled. I have never known this to be the case."

In one or two ways these extracts deserve record. In the first place, they are distinctly characteristic of a man who had gradually become an administrator, dealing with a variety of contingencies, and disinclined to trust his mind beyond the solution of the mediate. Lord Charles Beresford was really insisting on the thing which Sir Cooper Key did not think attainable, namely, plans of campaign in regard to possible future wars, which took into account all the known conditions, and prepared generally to meet them. His view, doubtless, was that if the plan of campaign were postponed until war was imminent, we might possibly find ourselves embarked without any plan; or, worse still, might see an obvious plan, but find ourselves with the wrong material for carrying it out. But the administrative view would surely be, that preparing for a definite scheme, and carrying on a definite building policy in view of that scheme, might be going further than safety and economy warranted. The same administrative fear dictated the desirability of strictly limiting the functions of an Intelligence Department. There was danger lest the Board might be led into theories of future war that would be found only theories when the time came.

Then, again, Sir Cooper Key remained, in the terms of this letter, just where he was in 1859 as to the strength of the navy. The Hamilton programme of 1889 cast no shadow before it on Sir Cooper Key's mind. The strength of the navy was entirely a matter of degree. There was no fixed limit of force which, on the probabilities, was necessary to us. We should be better if we had more naval force, and worse if we had less. That was the whole of it; and that was in 1888 the view of all but a very few men in the navy.

But, perhaps, of all the work in which Sir Cooper Key engaged after his retirement from the active service of his profession, none had a greater hold on his affection than the social interest of his immediate neighbourhood. Always of a sincerely religious temperament, and strongly attached to the Church of England, he almost at once became to Maidenhead and to his own parish a centre and pivot for all kinds of philanthropic and religious movement to circle round.

The following note, signed "W. G. S.,"[1] which appeared immediately after his death, gives an appreciative idea of what, in a short time, the Admiral became in the new environment of civil life:—

"When Sir Cooper Key left the Admiralty upon the resignation of the late Ministry, he settled down at Laggan House, Maidenhead. During the two and a half years he resided there he endeared himself to all, rich and poor alike. From the very first he took the liveliest interest in all church matters in the town of Maidenhead, and especially in those connected with the parish in which he lived. Whatever he undertook to do he did it with all his might. Constantly called to London on important business, he never neglected any local work which he had undertaken. As a county magistrate, or as a member of the Board of Guardians, he was conspicuous for the conscientious manner in which he performed his duties. As president of the local branch of the Church Defence Institution, he presided at a meeting in the Maidenhead Town Hall a few days before his death, and made a hearty speech upon the Church in Wales. As treasurer of the National Schools of Maidenhead, he would never miss a school meeting. As president of the local School of Art, he was always ready to speak on art. He also took a very lively interest in foreign missionary work, and was always prepared to speak at missionary meetings. In consequence of this, and of the great knowledge which he had of missionary work in many parts of the world, he was elected at the last annual meeting of the Society for the Propagation of the Gospel as one of the standing committee. As a Churchman he was a tower of strength in Maidenhead, a place where an example like his was specially valuable. Constant at the altar, never absent from church morning or evening on the Sunday, ready to help in any work connected with St. Luke's Church, the clergy of that parish feel that by his death they have lost their right hand.

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[1] The Rev. William G. Sawyer, who was then vicar of St. Luke's, Sir Cooper Key's parish.

"It was the high privilege of the writer to be much with him in the long and dangerous illness he had about a year ago. The patience and resignation to God's will which he showed through all that trying time was very beautiful to see. He was in all ways a good and a true man, who lived his religion in his daily life. His death has caused a void in his own parish beyond what words can express."

After quitting the Admiralty, Sir Cooper Key preserved his health, vigour, and bounding spirits until the end of 1886. Then he was attacked by a serious illness, which confined him to his bed for thirteen or fourteen weeks. But as he rallied and recovered, he seemed to have entered on a new lease of life, and finally thought himself as well as ever he was. But the former illness had left a great danger behind it in the form of a clot of blood situate in the leg.

On Friday the 2nd March 1888 Sir Cooper Key had been to London, and felt himself to be as well as he ever had been. Next morning there was no sign of ill-health till after breakfast, when he was seized by what seemed to be a slight attack of indigestion. As late as eight o'clock in the evening his medical attendant saw nothing more than dyspepsia in the case, but at half-past ten he suddenly became worse, and died quite quietly at eleven,—no doubt the clot had made its fatal progress to the heart, and ended the life there.

I have recorded how the boy wrote, on the first opening of his naval experience, that "he never was so happy in all his life." At the end of his career—it might have been the day before he died, but it was certainly not many days before he died—it happened that, meeting a friend in a railway carriage, he used almost, if not altogether, the same words. The chord struck at the beginning of his life was that struck at the end of it; and between was the beautiful melody of a true and real life, in which, if there were discords, they served the purpose of bringing out the harmony.

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